APPENDIX B

- **Year 2010 and Year 2030 Traffic Model**
- **Excerpts from Encinitas Ranch Specific Plan Traffic Study**
- **Excerpts from University Commons Specific Plan Amendment Number 3 FSEIR**
- **Year 2010 Intersection LOS Worksheets (HCM Method) With and Without Project Traffic**

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YEAR 2010 AND YEAR 2030 TRAFFIC MODEL FORECASTS

The traffic forecast documentation is on file at the City of Carlsbad and RBF Engineering, under whose direction these forecasts were prepared.

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Agencies

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describes methodology used in the processing of forecast model data, intersections, analysis process, and determination of significant impacts.

year volumes in 2010 and 2030 for the La Costa Town Square project, the ity subarea model 2010 and 2030 Alternative 5 transportation forecast was and 2030 forecast models, changes to land uses and new roadways have a e distribution of traffic volumes along a roadway. Land uses generate and be served by the roadway system. New roadways and the widening of e accounted for and included in the forecast model.

odels include projects that result in the full buildout of every parcel of land, . Plan Zoning level. Projects included in the model are projects that are t not yet constructed, constructed and recently completed and occupied. s of projects are included in the model. Projects generating more than 500 d in the model. The cumulative effect of all projects is embedded in the e produced from the 2010 and 2030 model.

e projects generating more than 500 daily trips in the Cities of Carlsbad verified as being included in the SANDAG model and are listed in Table lid not identify any cumulative projects within the vicinity of the La Costa

Table A
Cumulative Projects

Project Name	Project Description
e Bluffs	78 multi-family units
essi Ranch	516 single-family residential
	400 multi-family units
	10 acres commercial
	2160.5 ksf industrial
lavera Hills Village L-1	58 single-family residential
ntarini	105 single-family residential
	80 multi-family units
rlsbad Family Housing	60 apartments
rlsbad Office Campus	276,900 sf office
rlsbad Raceway Business Park	87.2 acre industrial
rlsbad Ranch PA 5	350 hotel/350 timeshare
sa La Costa	39 multi-family units
ybreak Community	10,900 sf church
x/Miller	21.5 acre industrial
een Valley – La Costa Glen	76 single-family residential
	359 multi-family units

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	Holly Springs	43 single family residential
	Kelly/JRM Office Bldg	84,600 sf office
	Kelly Ranch	215 single family residential
		494 multi-family units
		2.87 acre office
	La Costa Condominiums	58 multi-family units
	La Costa Plaza Shopping Center	75,670 sf commercial
	La Costa Resort/Spa	197 villas
		26,500 spa
		42,500 ballroom
	Los Coches Villages	87,000 sf community
	Manzanita Apartments	157 multi-family units
	Ocean Ridge	75,000 sf office
	Pacifica Palomar	120,000 sf office
	Palomar Beach Resort	162 room motel
	Palomar Forum	44.4 acre industrial
	Pavillion (Forum)	260,000 sf commercial
	Poinsettia Hill	160 sf
	Poinsettia Properties Master Plan	1,047 sf
		321 multi-family units
	Poinsettia/Tabata	231 single family residential
	Raceway Business Park	1,117 ksf Industrial Park
	Redeemer by the sea Church	72,360 sf church
	Robertson Ranch	1122 sf
		13 acre commercial
	Shelley Ranch	251 sf
	Summit at Carlsbad	143 apartments
	Sunny Creek Plaza	174,000 sf commercial
	Village by the sea	68 multi family units
San Marcos**	University Commons SPA 2	1,326 dwelling units
		2.1 acres muli-use
		12.8 acres light industrial
		31.7 acres recreation
		172 acres open space
	Walnut Hills II	128 units
	Fenton Properties (Scripps)	80 acre Medical complex
	Kaiser Permanente	30.6 acre medical complex
	University Center	13 acre business park
	San Marcos Highlands	238 units
	Legacy homes	29 units
	Town center/Civic center	10.7 acres civic center
		12.4 acres office/retail/business park
		3.5 acre hotel/retail
		5 acre office/retail

	5.2 acre retail
Hollandia	71 residential units
	40 acre high school/city park
San Marcos Creek Area Specific Plan	Citywide plan
City sub area plan	Citywide plan
Paloma	1,562 single family residential
Rancho Coronado Villages O & N	124 & 634 condo units
Gateway –Ivey	35 single family residential
Zilliox	55 condominiums
McCormic	48 single family residential
Kaufman and Broad	88 single family residential
Todd	9 single family residential
Kaufman and Broad	82 single family residential
Ashbrook Village	187 single family residential
Marino	8 single family residential
Millen	17 single family residential
Prominence	499 apartments
Mark Gelman	161 retirement apartments
Baiocchi	90 assisted living units
City of San Marcos	Rezone 11 acres from R1 to C
Upham	Rezone 32 acres from M to C
Ades/Gish	Rezone 31 acres from R1 to F-1-20
Bieri Group	99 single family residential
Zirpala	Rezone 6.97 acres from business park to light industrial
Schenker	4.42 acre industrial
West Company	18 single family residential
Loma Alta	102 single family residential
Hall	16 single family residential
Woodland Associates	18 single family residential
Deluca	12 single family residential
DeJong	7 single family residential
Mendenhall	27 single family residential
Hansen Aggregate	380 single family residential
Nevada Yei	40 single family residential
Nevada Yei	103 single family residential
Mallin	8 single family residential
Fry's	144,000 sf retail
Comfort Construction	120 apartments
San Elijo Hills	3,398 residential units/ commercial/parks/school/open space
Vineyard Hills	19 single family residential

	Rilingoon	32 single family residential
	Standard Pacific	95 single family residential
	Renaro	9 condominiums
	Fieldstone La Costa southeast	1,010 residential units
		50,000 sf commercial
	Rancho Carillo	1,880 units
	Rancheros	263 single family residential
	Mag Properties	600,000 sf commercial
	Rancho Cielo	800 single family residential
	Cielo Azul	Single family residential

*Source: City of Carlsbad
**Source: City of San Marcos

The number of vehicles estimated to be generated by the La Costa Town Square project (peak-hour and daily) are based on the rates outlined in the San Diego Association of Governments (SANDAG) "Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region", April 2002. The gross number of project trips was submitted to SANDAG and applied toward the traffic analysis zones (TAZs) related to the project site, which were zones 1054 and 4273.

The project traffic was distributed onto the roadway network based on a select zone assignment (SZA), which were obtained for the years 2010 and 2030. The SZA is the locally adopted process for a computerized assignment of traffic. The SZA was performed for TAZs 1054 and 4273 and provided ADT volumes on the roadway network surrounding the project site. It should be noted that the ADT volumes already include the La Costa Town Square project trips and represents traffic volumes that would be expected on the street network with the La Costa Town Square project.

The a.m. and p.m. peak-hour turning movement volumes at the intersections were obtained from the turn reports spreadsheets provided by SANDAG and converted from the ADT volumes by applying a conversion factor. Based on discussions with SANDAG, the a.m. peak-hour factor was 0.038 and the p.m. peak-hour factor was 0.034. Appendix A contains the raw model data in determining the future year turning movement volumes at the study intersections.

Study Intersections

According to the San Diego region guidelines for Traffic Impact Studies (TIS), all local roadway segments, intersections, and mainline freeway locations where the proposed project would add 50 or more peak-hour trips in either direction to the existing traffic should be included as part of the traffic analysis. The select zone analysis run specific for this project, based on the year 2030 model indicates that the proposed project would contribute 50 or more peak-hour trips to 41 key study intersections, which are shown in Table 1 below.

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NOTE: THE ENCINITAS RANCH TRAFFIC STUDY EVALUATED HIGHER ADT ON OLIVENHAIN RD. AND ON LEUCADIA BLVD. EAST OF I-5 THAN SHOWN FOR THE LA COSTA TOWN SQUARE PROJECT. THE CITY OF ENCINITAS HAS RETAINED 4-LANE CLASSIFICATIONS FOR THESE TWO ROADWAYS RATHER THAN WIDEN TO SIX LANES TO MITIGATE THE ENCINITAS RANCH VOLUMES.

Draft

ENCINITAS RANCH SPECIFIC PLAN TRAFFIC STUDY

Prepared for:

City of Encinitas

Prepared by:

Austin-Foust Associates, Inc.
2020 North Tustin Avenue
Santa Ana, California 92701
(714) 667-0496

January 26, 1994

38,000 ADT ENCINITAS RANCH
35,300 ADT LA COSTA TOWN SQUARE

49,000 ADT ENCINITAS RANCH
41,300 ADT LA COSTA TOWN SQUARE

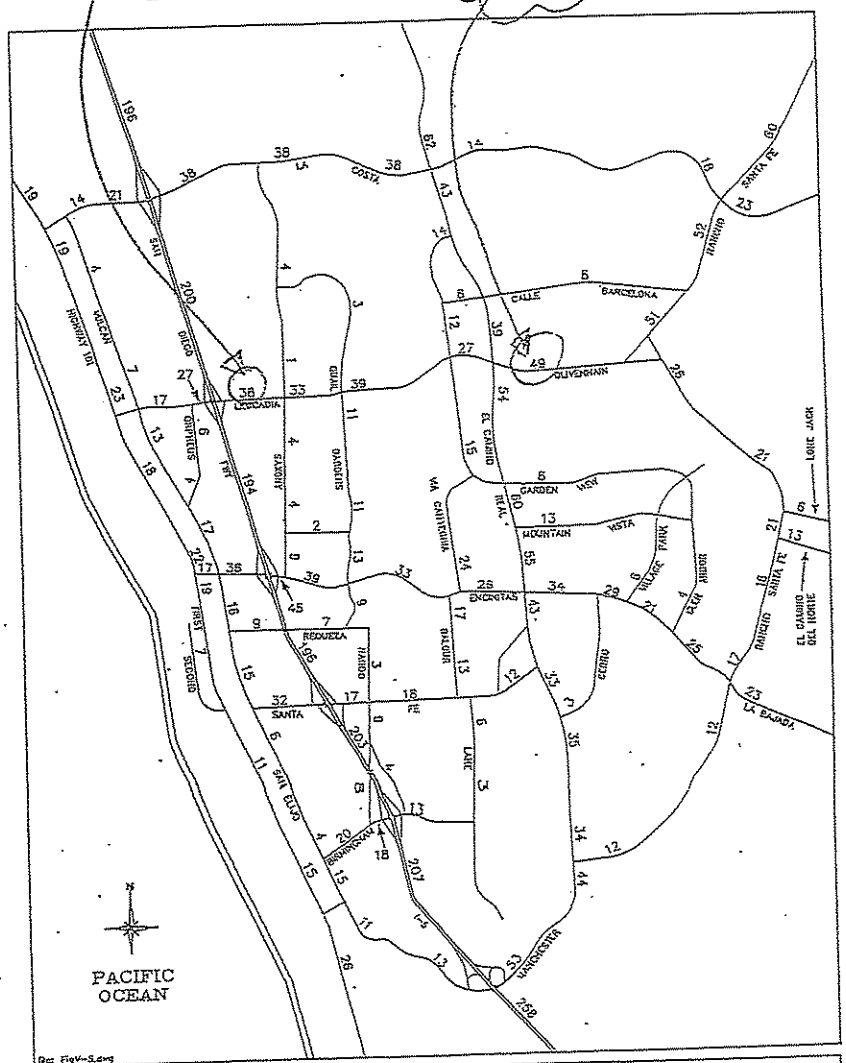

Figure V-8
POST-2010 ADT VOLUMES (000s)
-SPECIFIC PLAN
-WITH VIA CANTERBRIA EXTENSION

UNIVERSITY COMMONS SPECIFIC PLAN AMENDMENT NUMBER 3

FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT

May 2003

SCH No. 1990011013

Prepared for:

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EXCERPTS SHOWING ONLY 4-LANES ON RANCHO SANTA FE RD. AND SAN ELIJO RD. ARE FEASIBLE, WITH OVER-RIDING CONSIDERATIONS RATHER THAN WIDEN TO SIX LANES

1.0

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FINDINGS OF FACT AND
STATEMENT OF OVERRIDING CONSIDERATIONS FOR THE
UNIVERSITY COMMONS SPECIFIC PLAN AMENDMENT NO. 3

(Final Supplemental EIR 02-37)
(State Clearinghouse (SCH) No. 190011013)

DESCRIPTION OF CEQA FINDINGS AND STATEMENT OF OVERRIDING CONSIDERATIONS

California Environmental Quality Act

The California Environmental Quality Act (Public Resources Code Sections 21000-21178.1) ("CEQA") and the State CEQA Guidelines (Cal. Code of Regulations, Title 14, Sections 15000-15387) require that specific findings be made if a lead agency decides to approve a project which will have significant impacts:

> [N]o public agency shall approve or carry out a project for which an environmental impact report has been certified which identifies one or more significant effects on the environment that would occur if the project is approved or carried out unless both of the following occur:
>
> (a) The public agency makes one or more of the following findings with respect to each significant effect:
>
> (1) Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant effects on the environment.
>
> (2) Those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency.
>
> (3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report.
>
> (b) With respect to significant effects which were subject to a finding under paragraph (3) of subdivision (a), the public agency finds that specific overriding economic, legal, social, technological, or other benefits of the project outweigh the significant effects on the environment.

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ding(s): Changes or alterations have been required in, or incorporated into the posed Project which will lessen the impacts to traffic/circulation. Mitigation of such ıacts to below a level of significance could occur only through adoption of a Project rnative. Specific economic, legal, social, technological or other considerations make ıasible the Project alternatives identified in SEIR 02-37.

:ts in Support of Findings: The following mitigation measures have been ɔrporated to partially reduce the level of cumulative traffic impacts through ıstruction of the specific roadway improvements identified in the table below. The ject is only conditioned upon completion of improvements under the responsibility of iversity Commons.

Specific Improvements and Maximum Development Thresholds to Avoid Significant Impacts[1]

ıments are listed in the order of development threshold. The EDU/ADT threshold numbers shown are the maximum allowable values without the specific improvement.

Location	Specific Improvement	Total Project EDU/ADT Threshold	Responsibility[2]
n Elijo Road from Rancho nta Fe Road to eastern project undary	Construct as a four-lane major arterial	23/233	University Commons/
ıncho Santa Fe Road at San ijo Road	Relocate/widen intersection	23/233	City of Carlsbad
ıncho Santa Fe Road from San ijo Road to Melrose Drive	Widen to a six-lane prime arterial	61/614	City of Carlsbad
elrose Drive at Rancho Santa Fe ıad	Realign and widen intersection	61/614	City of San Marcos/ City of Carlsbad
elrose Drive from Rancho Santa Road to Patton Street (Sparrow ay)	Construct as a four-lane secondary arterial	61/614	City of San Marcos/ University Commons
elrose Drive from San Elijo ıad to northern project boundary Phase One	Construct as an interim improvement	61/614	University Commons
ıncho Santa Fe Road at La Costa eadows	Modify for restricted access	61/614	City of Carlsbad
ıncho Santa Fe Road from San ijo Road to La Costa Avenue	Widen to a six-lane prime arterial	103/1,034	City of Carlsbad
ıncho Santa Fe Road from elrose Drive to Lake San arcos Drive	Construct as a four-lane major arterial	152/1,522	City of San Marcos

4-LANE

4-LANE ONLY, NOT SIX.

No.	Location	Specific Improvement	Total Project EDU/ADT Threshold	Responsibility[2]
5a.	San Elijo (Questhaven) Road from eastern project boundary to Elfin Forest Road	Construct as a four-lane major arterial	200/2,000	San Elijo Ranch
5b.	San Elijo Road at Elfin Forest Road	Install traffic signal	200/2,000	San Elijo Ranch
6a.	Olivenhain Road from Rancho Santa Fe Road to Amargosa Drive	Construct as a four-lane major arterial	318/3,181	City of Carlsbad
6b.	Rancho Santa Fe Road at Olivenhain Road	Widen intersection	318/3,181	City of Carlsbad

No.	Location	Specific Improvement	Total Project EDU/ADT Threshold	Responsibility[2]
7a.	Melrose Drive from Patton Street (Sparrow Way) to San Elijo Road	Construct as a modified four-lane secondary arterial	907/9,072[3]	University Commons
7b.	Melrose Drive at Patton Street (Sparrow Way)	Install Traffic Signal	907/9,072[3]	University Commons
7c.	Melrose Drive at Diamond Street	Install Traffic Signal	907/9,072[3]	University Commons
8a.	Palomar Airport Road from Melrose Drive to El Camino Real	Widen to a six-lane prime arterial	1,307/13,076	City of Carlsbad
8b.	Palomar Airport Road at Melrose Drive	Widen intersection	1,307/13,076	City of Carlsbad
8c.	Palomar Airport Road at El Camino Real	Widen intersection	1,307/13,076	City of Carlsbad
9.	Rancho Santa Fe Road from Melrose Drive to Lake San Marcos Drive	Widen to a six-lane prime arterial	Less than significant	City of San Marcos/ San Elijo Hills University Commons
10a.	Rancho Santa Fe Road from La Costa Avenue to Olivenhain Road	Widen to a six-lane prime arterial	Less than significant	City of Carlsbad
10b.	Rancho Santa Fe Road at Olivenhain Road	Widen intersection	Less than significant	City of Carlsbad
11.	Elfin Forest Road from San Elijo Road to the southern boundary of the San Elijo Ranch project	Widen to a four-lane collector	Less than significant	San Elijo Ranch
12.	Rancho Santa Fe Road at San Marcos Boulevard	Widen intersection	Less than significant	City of San Marcos/ San Elijo Hills
13.	Twin Oaks Valley Road from Elfin Forest Road to Craven Road	Construct as a four-lane major arterial	Less than significant	City of San Marcos/ San Elijo Ranch

impacts to biological resources; demand for school facilities, demand for fire protection and emergency response services, demand for police services, and demand for park and recreation services.

Cumulative Impacts

As required by CEQA, this EIR analyzes the cumulative impacts of the Proposed Project. Section 15355 of the CEQA guidelines defines a cumulative impact as "two or more individual environmental effects which, when considered together, are considerable or which compound or increase other environmental impacts." Cumulative impacts may result from individual effects of a single project or the effects of several projects that are developed within a particular window of time. All projects which are closely related, past, present or reasonably anticipated to occur in the future, were analyzed in Section 7.0 of the SEIR. The impacts associated with the Proposed Project were analyzed in conjunction with the effects of other projects within the Proposed Project vicinity.

The Proposed Project's contribution to significant cumulative effects will be substantially reduced due to the design modifications incorporated into the Proposed Project as well as the various mitigation measures implemented in the Mitigation Monitoring and Reporting Program which are implemented as conditions of development of the Proposed Project. Although the Proposed Project's impacts have been mitigated to the extent feasible, the Proposed Project will contribute to significant cumulative impacts related to transportation/circulation and air quality.

Impacts That Remain Significant

The City Council finds that the impacts of the Proposed Project have been mitigated to the extent feasible by the mitigation measures discussed in the Mitigation Monitoring and Reporting Program. As demonstrated in these Findings, further mitigation of Project impacts is infeasible. To the extent that Proposed Project impacts have been mitigated to the extent feasible, it will be infeasible to further lessen, avoid, reduce, or mitigate the remaining significant cumulative effect to which the Proposed Project contributes. A Statement of Overriding Considerations has been prepared pursuant to the State CEQA Guidelines. See Cal. Code Regs. tit. 14, §§ 15043, 15093.

University Commons Specific Plan Amendment No. 3

After reviewing the Staff Report, the General Plan Amendment, the Specific Plan Amendment, and the Amended Development Agreement, the City Council has determined that: (1) the Proposed Project is beneficial to the City of San Marcos; (2) there are no other reasonable means of financing the public infrastructure because of substantial requirements for offsite improvements; (3) the improvements required to reduce cumulative traffic impacts to below a level of significance are infeasible from an engineering perspective, including nonstandard intersection, expansion of roadways beyond planned build out, and regional roadways.

4-LANES RANCHO SANTA FE RD
NOT SIX.

which includes Los Angeles, Orange, Riverside and San Bernardino Counties. The issue of basin-wide air quality is more appropriately discussed at the regional level, and it is neither feasible nor practicable for the Proposed Project to mitigate a regional issue. The project will incorporate mitigation measures that will reduce some of the cumulative impact associated with ozone precursors. Specific economic, legal, social, technological or other considerations make infeasible the Project alternatives identified in SEIR 02-37.

7.1.1.3 Facts in Support of Finding: Mitigation measures identified in the UCSP SEIR (2001) related to project construction that are still applicable to the Proposed Project include:

1. Minimizing simultaneous operation of multiple construction equipment units to maximum area and acreage provided for each individual phase of the Specific Plan Amendment Phasing Plan.
2. Use of low pollutant-emitting construction equipment.
3. Use of electrical construction equipment.
4. Use of catalytic reduction for gasoline powered equipment.
5. Watering the construction area, including surface streets, to minimize fugitive dust.

7.1.2 Traffic/Circulation

7.1.2.1 Impact(s): The buildout of the University Commons Specific Plan (UCSP) would contribute to significant cumulative impacts to traffic circulation associated with ongoing development in the area. The certified UCSP SEIR (2001) for the approved Specific Plan concluded that implementation of proposed and related projects will contribute to the degradation of the existing circulation network, putting a demand on existing facilities, thus contributing to the cumulative adverse traffic impact to the community. The approved Specific Plan identified measures that would mitigate direct project impacts of Specific Plan buildout to below a level of significance; however, long-term regional cumulative traffic impacts would remain significant and unmitigable.

The Proposed Project will result in overall traffic generation and distribution nearly identical to those in the approved Specific Plan. The Proposed Project includes an adjustment of land uses within the overall Specific Plan Area. The SEIR included a traffic impact analysis which utilized trip generation rates and pass-by assumptions that are consistent with the SANDAG trip generation manual. Additionally, independent traffic review of the Proposed Project was conducted by Urban Systems and Urban Crossroads. The result of these analyses concluded that the methods and assumptions utilized in the SEIR were adequate.

The UCSP SEIR (2001) concluded there would be significant and unmitigated cumulative traffic impacts. Therefore, the findings in the UCSP SEIR (2001) of a significant cumulative traffic impact are still applicable under the Proposed Project.

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Location	Specific Improvement	Total Project EDU/ADT Threshold	Responsibility[2]
ı Marcos Boulevard from ıcho Santa Fe Road to lrose Drive	Widen to a six-lane prime arterial	Less than significant	City of San Marcos/ City of Carlsbad
lrose Drive at Alga Road	Widen intersection	Less than significant	City of Carlsbad

Some roadway improvements indicated in the table may be complete or in process.
Applicant to reimburse for project frontage costs and proportionate funding for all offsite improvements, to be determined by City Engineer and/or development agreement.
The extension of Melrose Drive from Patton Street (Sparrow Way) to San Elijo Road is necessary for Phase Two.

itional mitigation measures, beyond those identified in the table above, for significant ulative roadway impacts are not practicable or feasible, as the required roadway rovements to reduce the impacts would require the creation of nonstandard sections, and expansion of roadways beyond their planned buildout. Furthermore, the nsion of roadways beyond their planned classification could result in the necessity to ire property adjacent to the roadway, most likely through condemnation.

ject Alternatives

d SEIR 02-37 has evaluated two alternatives to the Project. Section 4.0 of Final R 02-37 provides detailed descriptions and analysis of the alternatives in adequate il for a decision on whether the alternatives should be adopted in lieu of the Project.

ject Goals

onsidering and rejecting certain alternatives, the Project objectives must be weighed nst the ability of the various alternatives to meet most of these objectives. The posed Project's objectives that were identified in Final SEIR 02-37 and considered in e Findings are:

Provide for the establishment of a master-planned community, consisting of up to a maximum of 1,224 residential units made up of single-family and multifamily housing opportunities, including affordable housing units.

Comply with the City of San Marcos Housing Element and the provisions of Ordinance 2000-1090, "Inclusionary Housing Programs", by providing the required number of affordable housing units onsite.

Provide community-scale shopping opportunities within the University Commons area to reduce dependence on automobiles.

YEAR 2010

RAW DATA

Intersection Number	Node Number	Intersection
1	7878	Rancho Santa Fe Rd/San Marcos Blvd
2	7944	Rancho Santa Fe Rd/Lake San Marcos Dr
3	8013	Rancho Santa Fe Rd/Camino Del Arroyo Dr
4	8242	Rancho Santa Fe Rd/Island Dr
5	7907	Melrose Dr/Palomar Airport Rd
6	8076	Melrose Dr/Rancho Bravado
7	8099	Melrose Dr/Poinsettia Ln/Paseo Corto
8	22233	Melrose Dr/Carillo Wy
9	8316	Melrose Dr/Alga Rd
10	8404	Rancho Santa Fe Rd/Melrose Dr
11	8438	Rancho Santa Fe Rd/La Costa Meadows Dr
12	23261	Rancho Santa Fe Rd/San Elijo Rd
13	8712	Rancho Santa Fe Rd/La Costa Ave
14	8754	Rancho Santa Fe Rd/Camino De Los Coches
15	8793	Rancho Santa Fe Rd/Calle Barcelona
16	8820	Rancho Santa Fe Rd/Olivenhain Rd
17	8994	Rancho Santa Fe Rd/El Camino Del Norte
18	8470	El Camino Real/Aviara Pkwy/Alga Rd
19	8625	El Camino Real/Costa Del Mar Rd
20	8677	I-5 SB Ramps/La Costa Ave
21	8671	I-5 NB Ramps/La Costa Ave
22	8669	Piraeus Ave/La Costa Ave
23	8645	Saxony Rd/La Costa Ave
24	8662	El Camino Real/La Costa Ave
25	8653	La Costa Ave/Viejo Castilla Wy
26	8658	La Costa Ave/Romeria St
27	8656	La Costa Ave/Cadencia St
28	8853	I-5 SB Ramps/Leucadia Blvd
29	8857	I-5 NB Ramps/Leucadia Blvd
30	8855	Clark Ave/Leucadia Blvd
31	8859	Saxony Rd/Leucadia Blvd
32	8851	Sidonia St/Leucadia Blvd
33	8849	Quail Gardens Dr/Leucadia Blvd
34	8818	Garden View Rd/Leucadia Blvd
35	8829	Town Center Pl/Leucadia Blvd
36	8834	El Camino Real/Leucadia Blvd/Olivenhain Rd
37	22196	Amargosa Dr/Olivenhain Rd
38	8729	Calle Timiteo/La Costa Ave
39	8723	Camino De Los Coches/La Costa Ave
40	8540	San Elijo Road/Melrose Drive
41	8574	San Elijo Road/Fallsview Road

FROM	THRU	TO	combined purposes	Peak Hour Factor	Movement	Total Peak Hour
Rancho Santa Fe/El Camino Del Norte						
8975	8994	8996	1174	0.038	SBL	45
8975	8994	9168	15430	0.038	SBT	586
8996	8994	8975	10320	0.038	WBR	392
8996	8994	9168	1958	0.038	WBL	74
9168	8994	8975	11229	0.038	NBT	427
9168	8994	8996	267	0.038	NBR	10
Rancho Santa Fe/Olivenhain Rd						
4287	8820	8793	0	0.038	SBL	0
4287	8820	8846	591	0.038	SBT	22
4287	8820	22196	0	0.038	SBR	0
8793	8820	4287	0	0.038	WBR	0
8793	8820	8846	8043	0.038	WBL	306
8793	8820	22196	18856	0.038	WBT	717
8846	8820	4287	169	0.038	NBT	6
8846	8820	8793	14935	0.038	NBR	568
8846	8820	22196	11988	0.038	NBL	456
22196	8820	4287	0	0.038	EBL	0
22196	8820	8793	19666	0.038	EBT	747
22196	8820	8846	1579	0.038	EBR	60
Rancho Santa Fe/Calle Barcelona						
1063	8793	8754	2606	0.038	WBR	99
1063	8793	8820	3481	0.038	WBL	132
1063	8793	23253	2798	0.038	WBT	106
8754	8793	1063	615	0.038	SBL	23
8754	8793	8820	22846	0.038	SBT	868
8754	8793	23253	1020	0.038	SBR	39
8820	8793	1063	866	0.038	NBR	33
8820	8793	8754	33500	0.038	NBT	1273
8820	8793	23253	234	0.038	NBL	9
23253	8793	1063	773	0.038	EBT	29
23253	8793	8754	2588	0.038	EBL	98
23253	8793	8820	572	0.038	EBR	22
Rancho Santa Fe/Camino De Los Coches						
8731	8754	8762	611	0.038	SBL	23
8731	8754	8793	22886	0.038	SBT	870
8762	8754	8731	3311	0.038	WBR	126
8762	8754	8793	1595	0.038	WBL	61
8793	8754	8731	36931	0.038	NBT	1403
8793	8754	8762	1764	0.038	NBR	67
Rancho Santa Fe/La Costa Ave						
8707	8712	8729	4093	0.038	EBT	156
8707	8712	8731	4378	0.038	EBR	166
8707	8712	22194	8969	0.038	EBL	341
8729	8712	8707	3444	0.038	WBT	131
8729	8712	8731	358	0.038	WBL	14
8729	8712	22194	1395	0.038	WBR	53
8731	8712	8707	2164	0.038	NBL	82
8731	8712	8729	700	0.038	NBR	27
8731	8712	22194	37378	0.038	NBT	1420
22194	8712	8707	2610	0.038	SBR	99
22194	8712	8729	478	0.038	SBL	18
22194	8712	8731	18761	0.038	SBT	713

FROM	THRU	TO	combined purposes	Peak Hour Factor	Movement	Total Peak Hour
Rancho Santa Fe/San Elijo Rd						
8493	23261	8529	4773	0.038	SBL	181
8493	23261	22190	14412	0.038	SBT	548
8529	23261	8493	6027	0.038	WBR	229
8529	23261	22190	10153	0.038	WBL	386
22190	23261	8493	38763	0.038	NBT	1473
22190	23261	8529	18774	0.038	NBR	713
Rancho Santa Fe/La Costa Meadows						
8422	8438	8451	1985	0.038	SBL	75
8422	8438	8477	19185	0.038	SBT	729
8451	8438	8422	722	0.038	WBR	27
8451	8438	8477	0	0.038	WBL	0
8477	8438	8422	44791	0.038	NBT	1702
8477	8438	8451	0	0.038	NBR	0
Rancho Santa Fe/Melrose Drive						
8355	8404	8407	5583	0.038	SBR	212
8355	8404	8411	1938	0.038	SBL	74
8355	8404	8422	9896	0.038	SBT	376
8407	8404	8355	17559	0.038	EBL	667
8407	8404	8411	4457	0.038	EBT	169
8407	8404	8422	11274	0.038	EBR	428
8411	8404	8355	1541	0.038	WBR	59
8411	8404	8407	8879	0.038	WBT	337
8411	8404	8422	0	0.038	WBL	0
8422	8404	8355	21145	0.038	NBT	804
8422	8404	8407	24368	0.038	NBL	926
8422	8404	8411	0	0.038	NBR	0
Rancho Santa Fe Rd/Island Dr.						
4313	8242	8214	0	0.038	EBL	0
4313	8242	8300	0	0.038	EBR	0
8214	8242	4313	0	0.038	SBR	0
8214	8242	8300	17417	0.038	SBT	662
8300	8242	4313	0	0.038	NBL	0
8300	8242	8214	40246	0.038	NBT	1529
Rancho Santa Fe Rd/Camino Del Arroyo						
790	8013	7944	70	0.038	EBL	3
790	8013	8132	677	0.038	EBR	26
790	8013	14917	218	0.038	EBT	8
7944	8013	790	52	0.038	SBR	2
7944	8013	8132	14451	0.038	SBT	549
7944	8013	14917	2443	0.038	SBL	93
8132	8013	790	346	0.038	NBL	13
8132	8013	7944	43821	0.038	NBT	1665
8132	8013	14917	1138	0.038	NBR	43
14917	8013	790	58	0.038	WBT	2
14917	8013	7944	2489	0.038	WBR	95
14917	8013	8132	457	0.038	WBL	17
Rancho Santa Fe Rd/Lake San Marcos Dr						
804	7944	7878	3698	0.038	WBR	141
804	7944	8013	494	0.038	WBL	19
7878	7944	804	615	0.038	SBL	23
7878	7944	8013	16452	0.038	SBT	625
8013	7944	804	321	0.038	NBR	12
8013	7944	7878	46059	0.038	NBT	1750
Rancho Santa Fe Rd/San Marcos Blvd						
7841	7878	7856	12193	0.038	SBR	463
7841	7878	7880	2057	0.038	SBL	78
7841	7878	7944	7112	0.038	SBT	270
7856	7878	7841	6938	0.038	EBL	264
7856	7878	7880	17214	0.038	EBT	654
7856	7878	7944	657	0.038	EBR	25

FROM	THRU	TO	combined purposes	Peak Hour Factor	Movement	Total Peak Hour
7880	7878	7841	1810	0.038	WBR	69
7880	7878	7856	35315	0.038	WBT	1342
7880	7878	7944	9299	0.038	WBL	353
7944	7878	7841	22627	0.038	NBT	860
7944	7878	7856	2204	0.038	NBL	84
7944	7878	7880	24927	0.038	NBR	947
Melrose Dr/Alga Rd						
4268	8316	8292	785	0.038	WBR	30
4268	8316	8331	248	0.038	WBT	9
4268	8316	8407	485	0.038	WBL	18
8292	8316	4268	49	0.038	SBL	2
8292	8316	8331	1198	0.038	SBR	46
8292	8316	8407	10585	0.038	SBT	402
8331	8316	4268	94	0.038	EBT	4
8331	8316	8292	13673	0.038	EBL	520
8331	8316	8407	18504	0.038	EBR	703
8407	8316	4268	81	0.038	NBR	3
8407	8316	8292	34698	0.038	NBT	1319
8407	8316	8331	5526	0.038	NBL	210
Melrose Dr/Carillo Way						
808	22233	884	45	0.038	WBT	2
808	22233	8139	316	0.038	WBR	12
808	22233	8220	955	0.038	WBL	36
884	22233	808	42	0.038	EBT	2
884	22233	8139	2989	0.038	EBL	114
884	22233	8220	1401	0.038	EBR	53
8139	22233	808	140	0.038	SBL	5
8139	22233	884	394	0.038	SBR	15
8139	22233	8220	9476	0.038	SBT	360
8220	22233	808	430	0.038	NBR	16
8220	22233	884	521	0.038	NBL	20
8220	22233	8139	48205	0.038	NBT	1832
Melrose Dr/Poinsettia Ln						
816	8099	8077	5	0.038	WBR	0
816	8099	8139	427	0.038	WBL	16
816	8099	8174	677	0.038	WBT	26
8077	8099	816	5	0.038	SBL	0
8077	8099	8139	9181	0.038	SBT	349
8077	8099	8174	4501	0.038	SBR	171
8139	8099	816	262	0.038	NBR	10
8139	8099	8077	50026	0.038	NBT	1901
8139	8099	8174	1222	0.038	NBL	46
8174	8099	816	207	0.038	EBT	8
8174	8099	8077	14087	0.038	EBL	535
8174	8099	8139	403	0.038	EBR	15
Melrose Dr/Rancho Bravado						
4269	8076	7907	887	0.038	EBL	34
4269	8076	8077	163	0.038	EBR	6
7907	8076	4269	81	0.038	SBR	3
7907	8076	8077	13524	0.038	SBT	514
8077	8076	4269	90	0.038	NBL	3
8077	8076	7907	64027	0.038	NBT	2433

FROM	THRU	TO	combined purposes	Peak Hour Factor	Movement	Total Peak Hour
Melrose Dr/Palomar Airport Rd						
7835	7907	7912	21409	0.038	SBR	814
7835	7907	7942	2979	0.038	SBL	113
7835	7907	8076	9216	0.038	SBT	350
7912	7907	7835	19639	0.038	EBL	746
7912	7907	7942	24351	0.038	EBT	925
7912	7907	8076	2861	0.038	EBR	109
7942	7907	7835	6096	0.038	WBR	232
7942	7907	7912	40520	0.038	WBT	1540
7942	7907	8076	1527	0.038	WBL	58
8076	7907	7835	39833	0.038	NBT	1514
8076	7907	7912	14417	0.038	NBL	548
8076	7907	7942	10664	0.038	NBR	405
El Camino Real/Olivenhain Rd						
8785	8834	8829	2157	0.038	SBL	82
8785	8834	8862	18438	0.038	SBT	701
8785	8834	22197	859	0.038	SBL	33
8829	8834	8785	679	0.038	EBL	26
8829	8834	8862	1123	0.038	EBR	43
8829	8834	22197	11254	0.038	EBT	428
8862	8834	8785	49079	0.038	NBT	1865
8862	8834	8829	225	0.038	NBL	9
8862	8834	22197	8274	0.038	NBR	314
22197	8834	8785	11355	0.038	WBR	431
22197	8834	8829	13398	0.038	WBT	509
22197	8834	8862	10706	0.038	WBL	407
El Camino Real/La Costa Ave						
8647	8662	8660	2254	0.038	SBL	86
8647	8662	8665	15625	0.038	SBR	594
8647	8662	8684	21250	0.038	SBT	808
8660	8662	8647	10063	0.038	WBR	382
8660	8662	8665	5664	0.038	WBT	215
8660	8662	8684	1222	0.038	WBL	46
8665	8662	8647	19394	0.038	EBL	737
8665	8662	8660	2787	0.038	EBT	106
8665	8662	8684	2963	0.038	EBR	113
8684	8662	8647	70942	0.038	NBT	2696
8684	8662	8660	833	0.038	NBR	32
8684	8662	8665	5423	0.038	NBL	206
El Camino Real/Costa Del Mar						
1023	8625	8570	2960	0.038	WBR	112
1023	8625	8647	3503	0.038	WBL	133
8570	8625	1023	1491	0.038	SBL	57
8570	8625	8647	36579	0.038	SBT	1390
8647	8625	1023	2069	0.038	NBR	79
8647	8625	8570	98803	0.038	NBT	3755
El Camino Real/Aviara Pkwy/Alga Rd						
8426	8470	8467	797	0.038	SBR	30
8426	8470	8472	2105	0.038	SBL	80
8426	8470	8570	20458	0.038	SBT	777
8467	8470	8426	1828	0.038	EBL	69
8467	8470	8472	4674	0.038	EBT	178
8467	8470	8570	4272	0.038	EBR	162
8472	8470	8426	7360	0.038	WBR	280
8472	8470	8467	6552	0.038	WBT	249
8472	8470	8570	10434	0.038	WBL	396
8570	8470	8426	64733	0.038	NBT	2460
8570	8470	8467	22017	0.038	NBL	837
8570	8470	8472	14501	0.038	NBR	551

FROM	THRU	TO	combined purposes	Peak Hour Factor	Movement	Total Peak Hour
I-5 SB Ramps/La Costa Ave						
8623	8677	8671	2646	0.038	SBL	101
8623	8677	8680	9532	0.038	SBR	362
8623	8677	8709	0	0.038	SBT	0
8671	8677	8680	9763	0.038	WBT	371
8671	8677	8709	12216	0.038	WBL	464
8680	8677	8671	10653	0.038	EBT	405
8680	8677	8709	2230	0.038	EBR	85
I-5 NB Ramps/La Costa Ave						
8670	8671	8654	28163	0.038	WBR	1070
8670	8671	8677	20780	0.038	WBT	790
8677	8671	8654	3928	0.038	EBL	149
8677	8671	8670	9370	0.038	EBT	356
8714	8671	8654	0	0.038	NBT	0
8714	8671	8670	4612	0.038	NBR	175
8714	8671	8677	1199	0.038	NBL	46
La Costa Ave/Piraeus St						
8645	8669	8670	24365	0.038	WBT	926
8645	8669	8706	530	0.038	WBL	20
8670	8669	8645	13425	0.038	EBT	510
8670	8669	8706	557	0.038	EBR	21
8706	8669	8645	5597	0.038	NBR	213
8706	8669	8670	24579	0.038	NBL	934
La Costa Ave/Saxony Rd						
8665	8645	8669	23648	0.038	WBT	899
8665	8645	8759	3063	0.038	WBL	116
8669	8645	8665	18707	0.038	EBT	711
8669	8645	8759	315	0.038	EBR	12
8759	8645	8665	6438	0.038	NBR	245
8759	8645	8669	1246	0.038	NBL	47
La Costa Ave/Viejo Castilla Wy						
1030	8653	8676	0	0.038	SBL	0
1030	8653	22980	5026	0.038	SBR	191
8676	8653	1030	0	0.038	WBR	0
8676	8653	22980	9498	0.038	WBT	361
22980	8653	1030	478	0.038	EBL	18
22980	8653	8676	4001	0.038	EBT	152
La Costa Ave/Romeria St						
1030	8658	8656	2666	0.038	SBL	101
1030	8658	8672	0	0.038	SBR	0
1030	8658	22984	136	0.038	SBT	5
8656	8658	1030	439	0.038	WBR	17
8656	8658	8672	9498	0.038	WBT	361
8656	8658	22984	0	0.038	WBL	0
8672	8658	1030	0	0.038	EBL	0
8672	8658	8656	4001	0.038	EBT	152
8672	8658	22984	0	0.038	EBR	0
22984	8658	1030	77	0.038	NBT	3
22984	8658	8656	114	0.038	NBR	4
22984	8658	8672	0	0.038	NBL	0
La Costa Ave/Cadencia St						
1024	8656	8658	3720	0.038	SBR	141
1024	8656	8686	4720	0.038	SBL	179
8658	8656	1024	523	0.038	EBL	20
8658	8656	8686	6259	0.038	EBT	238
8686	8656	1024	831	0.038	WBR	32
8686	8656	8658	6217	0.038	WBT	236

FROM	THRU	TO	combined purposes	Peak Hour Factor	Movement	Total Peak Hour
La Costa Ave/Calle Timiteo						
1054	8729	1056	729	0.038	SBT	28
1054	8729	8712	1000	0.038	SBR	38
1054	8729	8723	1734	0.038	SBL	66
1056	8729	1054	1069	0.038	NBT	41
1056	8729	8712	2740	0.038	NBL	104
1056	8729	8723	355	0.038	NBR	13
8712	8729	1054	2056	0.038	EBL	78
8712	8729	1056	1373	0.038	EBR	52
8712	8729	8723	1841	0.038	EBT	70
8723	8729	1054	3507	0.038	WBR	133
8723	8729	1056	203	0.038	WBL	8
8723	8729	8712	1457	0.038	WBT	55
SB I-5 Ramps/Leucadia Blvd						
8812	8853	8852	1369	0.038	SBR	52
8812	8853	8856	3192	0.038	SBL	121
8812	8853	8876	0	0.038	SBT	0
8852	8853	8856	27587	0.038	EBT	1048
8852	8853	8876	5997	0.038	EBR	228
8856	8853	8852	4337	0.038	WBT	165
8856	8853	8876	10262	0.038	WBL	390
NB I-5 Ramps/Leucadia Blvd						
8855	8857	8848	6154	0.038	WBR	234
8855	8857	8856	13242	0.038	WBT	503
8856	8857	8848	23085	0.038	EBL	877
8856	8857	8855	7694	0.038	EBT	292
8897	8857	8848	199	0.038	NBT	8
8897	8857	8855	6931	0.038	NBR	263
8897	8857	8856	1357	0.038	NBL	52
Leucadia Blvd/Clark Ave						
1068	8855	1091	16	0.038	SBT	1
1068	8855	8857	938	0.038	SBR	36
1068	8855	8858	720	0.038	SBL	27
1091	8855	1068	13	0.038	NBT	0
1091	8855	8857	2397	0.038	NBL	91
1091	8855	8858	715	0.038	NBR	27
8857	8855	1068	192	0.038	EBL	7
8857	8855	1091	256	0.038	EBR	10
8857	8855	8858	14178	0.038	EBT	539
8858	8855	1068	141	0.038	WBR	5
8858	8855	1091	0	0.038	WBL	0
8858	8855	8857	16060	0.038	WBT	610
Leucadia Blvd/Saxony Rd						
8838	8859	8851	154	0.038	SBL	6
8838	8859	8858	1100	0.038	SBR	42
8838	8859	8891	3201	0.038	SBT	122
8851	8859	8838	0	0.038	WBR	0
8851	8859	8858	14402	0.038	WBT	547
8851	8859	8891	3567	0.038	WBL	136
8858	8859	8838	170	0.038	EBL	6
8858	8859	8851	14774	0.038	EBT	561
8858	8859	8891	669	0.038	EBR	25
8891	8859	8838	4266	0.038	NBT	162
8891	8859	8851	2132	0.038	NBR	81
8891	8859	8858	699	0.038	NBL	27
Leucadia Blvd/Sidonia St						
1076	8851	1090	6	0.038	SBT	0
1076	8851	8849	818	0.038	SBL	31
1076	8851	8859	736	0.038	SBR	28
1090	8851	1076	12	0.038	NBT	0
1090	8851	8849	916	0.038	NBR	35

2010 AM

FROM	THRU	TO	combined purposes	Peak Hour Factor	Movement	Total Peak Hour
1090	8851	8859	426	0.038	NBL	16
8849	8851	1076	313	0.038	WBR	12
8849	8851	1090	0	0.038	WBL	0
8849	8851	8859	16807	0.038	WBT	639
8859	8851	1076	228	0.038	EBL	9
8859	8851	1090	0	0.038	EBR	0
8859	8851	8849	16833	0.038	EBT	640

2010 AM

FROM	THRU	TO	combined purposes	Peak Hour Factor	Movement	Total Peak Hour
Leucadia Blvd/Quail Gardens Dr						
8818	8849	8822	240	0.038	WBR	9
8818	8849	8851	15127	0.038	WBT	575
8818	8849	8871	5313	0.038	WBL	202
8822	8849	8818	1128	0.038	SBL	43
8822	8849	8851	0	0.038	SBR	0
8822	8849	8871	710	0.038	SBT	27
8851	8849	8818	17471	0.038	EBT	664
8851	8849	8822	17	0.038	EBL	1
8851	8849	8871	1079	0.038	EBR	41
8871	8849	8818	7231	0.038	NBR	275
8871	8849	8822	178	0.038	NBT	7
8871	8849	8851	1994	0.038	NBL	76
Leucadia Blvd/Garden View Rd						
8786	8818	8829	113	0.038	SBL	4
8786	8818	8849	5749	0.038	SBR	218
8786	8818	8905	331	0.038	SBT	13
8829	8818	8786	430	0.038	WBR	16
8829	8818	8849	12892	0.038	WBT	490
8829	8818	8905	10	0.038	WBL	0
8849	8818	8786	6057	0.038	EBL	230
8849	8818	8829	16954	0.038	EBT	644
8849	8818	8905	2818	0.038	EBR	107
8905	8818	8786	3718	0.038	NBT	141
8905	8818	8829	430	0.038	NBR	16
8905	8818	8849	2038	0.038	NBL	77
Leucadia Blvd/Town Center Pl						
1073	8829	1083	461	0.038	SBT	18
1073	8829	8818	843	0.038	SBR	32
1073	8829	8834	0	0.038	SBL	0
1083	8829	1073	448	0.038	NBT	17
1083	8829	8818	574	0.038	NBL	22
1083	8829	8834	975	0.038	NBR	37
8818	8829	1073	3492	0.038	EBL	133
8818	8829	1083	1923	0.038	EBR	73
8818	8829	8834	12082	0.038	EBT	459
8834	8829	1073	0	0.038	WBR	0
8834	8829	1083	3865	0.038	WBL	147
8834	8829	8818	11915	0.038	WBT	453
Olivenhain Rd/Amargosa Dr						
4287	22196	8820	0	0.038	SBL	0
4287	22196	8865	36	0.038	SBT	1
4287	22196	22197	5049	0.038	SBR	192
8820	22196	4287	0	0.038	WBR	0
8820	22196	8865	146	0.038	WBL	6
8820	22196	22197	30698	0.038	WBT	1167
8865	22196	4287	56	0.038	NBT	2
8865	22196	8820	1735	0.038	NBR	66
8865	22196	22197	1610	0.038	NBL	61
22197	22196	4287	497	0.038	EBL	19
22197	22196	8820	19510	0.038	EBT	741
22197	22196	8865	209	0.038	EBR	8
Camino De Los Coches/La Costa Ave						
1051	8723	8729	1789	0.038	WBT	68
1051	8723	8740	1366	0.038	WBL	52
8729	8723	1051	1512	0.038	EBT	57
8729	8723	8740	2418	0.038	EBR	92
8740	8723	1051	1372	0.038	NBR	52
8740	8723	8729	3378	0.038	NBL	128
San Elijo Road/Melrose Dr						
8517	8540	8529	985	0.038	SBR	37

2010 AM

FROM	THRU	TO	combined purposes	Peak Hour Factor	Movement	Total Peak Hour
8517	8540	8574	942	0.038	SBL	36
8529	8540	8517	1000	0.038	EBL	38
8529	8540	8574	19616	0.038	EBT	745
8574	8540	8517	7273	0.038	WBR	276
8574	8540	8529	16113	0.038	WBT	612
San Elijo Road/Fallsview Road						
999	8574	8540	2848	0.038	NBL	108
999	8574	8578	1420	0.038	NBR	54
8540	8574	999	901	0.038	EBR	34
8540	8574	8578	19657	0.038	EBT	747
8578	8574	999	576	0.038	WBL	22
8578	8574	8540	20538	0.038	WBT	780

Note:
Based on data provided by SANDAG

FROM	THRU	TO	Combined Purpose	Peak Hour Factor	Movement	Total Peak Hour
Rancho Santa Fe/El Camino Del Norte						
8975	8994	8996	6024	0.034	SBL	205
8975	8994	9168	13458	0.034	SBT	458
8996	8994	8975	1846	0.034	WBR	63
8996	8994	9168	1140	0.034	WBL	39
9168	8994	8975	15071	0.034	NBT	512
9168	8994	8996	1886	0.034	NBR	64
Rancho Santa Fe/Olivenhain Rd						
4287	8820	8793	0	0.034	SBL	0
4287	8820	8846	209	0.034	SBT	7
4287	8820	22196	0	0.034	SBR	0
8793	8820	4287	0	0.034	WBR	0
8793	8820	8846	14918	0.034	WBL	507
8793	8820	22196	22105	0.034	WBT	752
8846	8820	4287	479	0.034	NBT	16
8846	8820	8793	8084	0.034	NBR	275
8846	8820	22196	2470	0.034	NBL	84
22196	8820	4287	0	0.034	EBL	0
22196	8820	8793	27431	0.034	EBT	933
22196	8820	8846	12398	0.034	EBR	422
Rancho Santa Fe/Calle Barcelona						
1063	8793	8754	830	0.034	WBR	28
1063	8793	8820	1420	0.034	WBL	48
1063	8793	23253	1016	0.034	WBT	35
8754	8793	1063	2550	0.034	SBL	87
8754	8793	8820	35336	0.034	SBT	1201
8754	8793	23253	2866	0.034	SBR	97
8820	8793	1063	5162	0.034	NBR	176
8820	8793	8754	29856	0.034	NBT	1015
8820	8793	23253	498	0.034	NBL	17
23253	8793	1063	2799	0.034	EBT	95
23253	8793	8754	2375	0.034	EBL	81
23253	8793	8820	266	0.034	EBR	9
Rancho Santa Fe/Camino De Los Coches						
8731	8754	8762	1947	0.034	SBL	66
8731	8754	8793	39213	0.034	SBT	1333
8762	8754	8731	524	0.034	WBR	18
8762	8754	8793	1538	0.034	WBL	52
8793	8754	8731	29899	0.034	NBT	1017
8793	8754	8762	3162	0.034	NBR	108
Rancho Santa Fe/La Costa Ave						
8707	8712	8729	6574	0.034	EBT	224
8707	8712	8731	1042	0.034	EBR	35
8707	8712	22194	2377	0.034	EBL	81
8729	8712	8707	5790	0.034	WBT	197
8729	8712	8731	2066	0.034	WBL	70
8729	8712	22194	758	0.034	WBR	26
8731	8712	8707	5088	0.034	NBL	173
8731	8712	8729	3727	0.034	NBR	127
8731	8712	22194	21608	0.034	NBT	735
22194	8712	8707	10083	0.034	SBR	343
22194	8712	8729	1542	0.034	SBL	52
22194	8712	8731	38052	0.034	SBT	1294

FROM	THRU	TO	Combined Purpose	Peak Hour Factor	Movement	Total Peak Hour
Rancho Santa Fe/San Elijo Rd						
8493	23261	8529	5263	0.034	SBL	179
8493	23261	22190	32490	0.034	SBT	1105
8529	23261	8493	1206	0.034	WBR	41
8529	23261	22190	27242	0.034	WBL	926
22190	23261	8493	18782	0.034	NBT	639
22190	23261	8529	14001	0.034	NBR	476
Rancho Santa Fe/La Costa Meadows						
8422	8438	8451	8306	0.034	SBL	282
8422	8438	8477	37753	0.034	SBT	1284
8451	8438	8422	1696	0.034	WBR	58
8451	8438	8477	0	0.034	WBL	0
8477	8438	8422	19988	0.034	NBT	680
8477	8438	8451	0	0.034	NBR	0
Rancho Santa Fe/Melrose Drive						
8355	8404	8407	20410	0.034	SBR	694
8355	8404	8411	1599	0.034	SBL	54
8355	8404	8422	23198	0.034	SBT	789
8407	8404	8355	6934	0.034	EBL	236
8407	8404	8411	11016	0.034	EBT	375
8407	8404	8422	22861	0.034	EBR	777
8411	8404	8355	2552	0.034	WBR	87
8411	8404	8407	8538	0.034	WBT	290
8411	8404	8422	0	0.034	WBL	0
8422	8404	8355	12324	0.034	NBT	419
8422	8404	8407	9360	0.034	NBL	318
8422	8404	8411	0	0.034	NBR	0
Rancho Santa Fe Rd/Island Dr						
4313	8242	8214	0	0.034	EBL	0
4313	8242	8300	0	0.034	EBR	0
8214	8242	4313	0	0.034	SBR	0
8214	8242	8300	45207	0.034	SBT	1537
8300	8242	4313	0	0.034	NBL	0
8300	8242	8214	21810	0.034	NBT	742
Rancho Santa Fe Rd/Camino Del Arroyo						
790	8013	7944	62	0.034	EBL	2
790	8013	8132	428	0.034	EBR	15
790	8013	14917	192	0.034	EBT	7
7944	8013	790	88	0.034	SBR	3
7944	8013	8132	50891	0.034	SBT	1730
7944	8013	14917	5550	0.034	SBL	189
8132	8013	790	778	0.034	NBL	26
8132	8013	7944	20860	0.034	NBT	709
8132	8013	14917	1303	0.034	NBR	44
14917	8013	790	475	0.034	WBT	16
14917	8013	7944	6030	0.034	WBR	205
14917	8013	8132	2437	0.034	WBL	83
Rancho Santa Fe Rd/Lake San Marcos Dr						
804	7944	7878	1237	0.034	WBR	42
804	7944	8013	509	0.034	WBL	17
7878	7944	804	4583	0.034	SBL	156
7878	7944	8013	56021	0.034	SBT	1905
8013	7944	804	650	0.034	NBR	22
8013	7944	7878	26303	0.034	NBT	894
Rancho Santa Fe Rd/San Marcos Blvd						
7841	7878	7856	9653	0.034	SBR	328
7841	7878	7880	3852	0.034	SBL	131
7841	7878	7944	30030	0.034	SBT	1021
7856	7878	7841	8856	0.034	EBL	301
7856	7878	7880	39377	0.034	EBT	1339
7856	7878	7944	5371	0.034	EBR	183

2010 PM

FROM	THRU	TO	Combined Purpose	Peak Hour Factor	Movement	Total Peak Hour
7880	7878	7841	3852	0.034	WBR	131
7880	7878	7856	19089	0.034	WBT	649
7880	7878	7944	25202	0.034	WBL	857
7944	7878	7841	12617	0.034	NBT	429
7944	7878	7856	1175	0.034	NBL	40
7944	7878	7880	13748	0.034	NBR	467
Melrose Dr/Alga Rd						
4268	8316	8292	135	0.034	WBR	5
4268	8316	8331	131	0.034	WBT	4
4268	8316	8407	146	0.034	WBL	5
8292	8316	4268	730	0.034	SBL	25
8292	8316	8331	11816	0.034	SBR	402
8292	8316	8407	24777	0.034	SBT	842
8331	8316	4268	508	0.034	EBT	17
8331	8316	8292	1690	0.034	EBL	57
8331	8316	8407	16316	0.034	EBR	555
8407	8316	4268	595	0.034	NBR	20
8407	8316	8292	11588	0.034	NBT	394
8407	8316	8331	21584	0.034	NBL	734
Melrose Dr/Carillo Way						
808	22233	884	52	0.034	WBT	2
808	22233	8139	261	0.034	WBR	9
808	22233	8220	514	0.034	WBL	17
884	22233	808	63	0.034	EBT	2
884	22233	8139	1017	0.034	EBL	35
884	22233	8220	826	0.034	EBR	28
8139	22233	808	732	0.034	SBL	25
8139	22233	884	3874	0.034	SBR	132
8139	22233	8220	35983	0.034	SBT	1223
8220	22233	808	1129	0.034	NBR	38
8220	22233	884	1703	0.034	NBL	58
8220	22233	8139	10581	0.034	NBT	360
Melrose Dr/Poinsettia Ln						
816	8099	8077	5	0.034	WBR	0
816	8099	8139	363	0.034	WBL	12
816	8099	8174	338	0.034	WBT	11
8077	8099	816	7	0.034	SBL	0
8077	8099	8139	37478	0.034	SBT	1274
8077	8099	8174	15387	0.034	SBR	523
8139	8099	816	448	0.034	NBR	15
8139	8099	8077	10395	0.034	NBT	353
8139	8099	8174	1017	0.034	NBL	35
8174	8099	816	1093	0.034	EBT	37
8174	8099	8077	12779	0.034	EBL	434
8174	8099	8139	2749	0.034	EBR	93
Melrose Dr/Rancho Bravado						
4269	8076	7907	173	0.034	EBL	6
4269	8076	8077	123	0.034	EBR	4
7907	8076	4269	1034	0.034	SBR	35
7907	8076	8077	52748	0.034	SBT	1793
8077	8076	4269	252	0.034	NBL	9
8077	8076	7907	22926	0.034	NBT	779

FROM	THRU	TO	Combined Purpose	Peak Hour Factor	Movement	Total Peak Hour
Melrose Dr/Palomar Airport Rd						
7835	7907	7912	23959	0.034	SBR	815
7835	7907	7942	3367	0.034	SBL	114
7835	7907	8076	36622	0.034	SBT	1245
7912	7907	7835	13190	0.034	EBL	448
7912	7907	7942	39557	0.034	EBT	1345
7912	7907	8076	5457	0.034	EBR	186
7942	7907	7835	2215	0.034	WBR	75
7942	7907	7912	33196	0.034	WBT	1129
7942	7907	8076	11703	0.034	WBL	398
8076	7907	7835	15120	0.034	NBT	514
8076	7907	7912	3913	0.034	NBL	133
8076	7907	7942	4066	0.034	NBR	138
El Camino Real/Olivenhain Rd						
8785	8834	8829	2036	0.034	SBL	69
8785	8834	8862	44187	0.034	SBT	1502
8785	8834	22197	8300	0.034	SBL	282
8829	8834	8785	4361	0.034	EBL	148
8829	8834	8862	875	0.034	EBR	30
8829	8834	22197	19601	0.034	EBT	666
8862	8834	8785	24125	0.034	NBT	820
8862	8834	8829	3180	0.034	NBL	108
8862	8834	22197	16614	0.034	NBR	565
22197	8834	8785	1339	0.034	WBR	46
22197	8834	8829	12651	0.034	WBT	430
22197	8834	8862	11296	0.034	WBL	384
El Camino Real/La Costa Ave						
8647	8662	8660	8754	0.034	SBL	298
8647	8662	8665	17752	0.034	SBR	604
8647	8662	8684	71908	0.034	SBT	2445
8660	8662	8647	2271	0.034	WBR	77
8660	8662	8665	3353	0.034	WBT	114
8660	8662	8684	1094	0.034	WBL	37
8665	8662	8647	13242	0.034	EBL	450
8665	8662	8660	6950	0.034	EBT	236
8665	8662	8684	6399	0.034	EBR	218
8684	8662	8647	30167	0.034	NBT	1026
8684	8662	8660	1361	0.034	NBR	46
8684	8662	8665	4525	0.034	NBL	154
El Camino Real/Costa Del Mar						
1023	8625	8570	3824	0.034	WBR	130
1023	8625	8647	5747	0.034	WBL	195
8570	8625	1023	5278	0.034	SBL	179
8570	8625	8647	93161	0.034	SBT	3167
8647	8625	1023	6409	0.034	NBR	218
8647	8625	8570	40155	0.034	NBT	1365
El Camino Real/Aviara Pkwy/Alga Rd						
8426	8470	8467	2315	0.034	SBR	79
8426	8470	8472	6098	0.034	SBL	207
8426	8470	8570	63721	0.034	SBT	2167
8467	8470	8426	1041	0.034	EBL	35
8467	8470	8472	13174	0.034	EBT	448
8467	8470	8570	19822	0.034	EBR	674
8472	8470	8426	1039	0.034	WBR	35
8472	8470	8467	7070	0.034	WBT	240
8472	8470	8570	13993	0.034	WBL	476
8570	8470	8426	18585	0.034	NBT	632
8570	8470	8467	7530	0.034	NBL	256
8570	8470	8472	13899	0.034	NBR	473

FROM	THRU	TO	Combined Purpose	Peak Hour Factor	Movement	Total Peak Hour
I-5 SB Ramps/La Costa Ave						
8623	8677	8671	13039	0.034	SBL	443
8623	8677	8680	6718	0.034	SBR	228
8623	8677	8709	0	0.034	SBT	0
8671	8677	8680	11031	0.034	WBT	375
8671	8677	8709	3514	0.034	WBL	119
8680	8677	8671	11701	0.034	EBT	398
8680	8677	8709	1520	0.034	EBR	52
I-5 NB Ramps/La Costa Ave						
8670	8671	8654	5538	0.034	WBR	188
8670	8671	8677	12318	0.034	WBT	419
8677	8671	8654	2570	0.034	EBL	87
8677	8671	8670	22169	0.034	EBT	754
8714	8671	8654	0	0.034	NBT	0
8714	8671	8670	9657	0.034	NBR	328
8714	8671	8677	2227	0.034	NBL	76
La Costa Ave/Piraeus St						
8645	8669	8670	16441	0.034	WBT	559
8645	8669	8706	1751	0.034	WBL	60
8670	8669	8645	28587	0.034	EBT	972
8670	8669	8706	3240	0.034	EBR	110
8706	8669	8645	1062	0.034	NBR	36
8706	8669	8670	1415	0.034	NBL	48
La Costa Ave/Saxony Rd						
8665	8645	8669	17870	0.034	WBT	608
8665	8645	8759	7760	0.034	WBL	264
8669	8645	8665	25603	0.034	EBT	871
8669	8645	8759	4046	0.034	EBR	138
8759	8645	8665	987	0.034	NBR	34
8759	8645	8669	322	0.034	NBL	11
La Costa Ave/Viejo Castilla Wy						
1030	8653	8676	0	0.034	SBL	0
1030	8653	22980	944	0.034	SBR	32
8676	8653	1030	0	0.034	WBR	0
8676	8653	22980	4918	0.034	WBT	167
22980	8653	1030	6326	0.034	EBL	215
22980	8653	8676	9317	0.034	EBT	317
La Costa Ave/Romeria St						
1030	8658	8656	849	0.034	SBL	29
1030	8658	8672	0	0.034	SBR	0
1030	8658	22984	87	0.034	SBT	3
8656	8658	1030	3193	0.034	WBR	109
8656	8658	8672	4918	0.034	WBT	167
8656	8658	22984	0	0.034	WBL	0
8672	8658	1030	0	0.034	EBL	0
8672	8658	8656	9317	0.034	EBT	317
8672	8658	22984	0	0.034	EBR	0
22984	8658	1030	132	0.034	NBT	4
22984	8658	8656	493	0.034	NBR	17
22984	8658	8672	0	0.034	NBL	0
La Costa Ave/Cadencia St						
1024	8656	8658	654	0.034	SBR	22
1024	8656	8686	1474	0.034	SBL	50
8658	8656	1024	4340	0.034	EBL	148
8658	8656	8686	6320	0.034	EBT	215
8686	8656	1024	5327	0.034	WBR	181
8686	8656	8658	7457	0.034	WBT	254

FROM	THRU	TO	Combined Purpose	Peak Hour Factor	Movement	Total Peak Hour
La Costa Ave/Calle Timiteo						
1054	8729	1056	3374	0.034	SBT	115
1054	8729	8712	4300	0.034	SBR	146
1054	8729	8723	8264	0.034	SBL	281
1056	8729	1054	2721	0.034	NBT	93
1056	8729	8712	2279	0.034	NBL	77
1056	8729	8723	373	0.034	NBR	13
8712	8729	1054	6377	0.034	EBL	217
8712	8729	1056	3089	0.034	EBR	105
8712	8729	8723	2376	0.034	EBT	81
8723	8729	1054	4885	0.034	WBR	166
8723	8729	1056	380	0.034	WBL	13
8723	8729	8712	2036	0.034	WBT	69
SB I-5 Ramps/Leucadia Blvd						
8812	8853	8852	3694	0.034	SBR	126
8812	8853	8856	7870	0.034	SBL	268
8812	8853	8876	0	0.034	SBT	0
8852	8853	8856	7285	0.034	EBT	248
8852	8853	8876	2183	0.034	EBR	74
8856	8853	8852	13079	0.034	WBT	445
8856	8853	8876	9528	0.034	WBL	324
NB I-5 Ramps/Leucadia Blvd						
8855	8857	8848	5147	0.034	WBR	175
8855	8857	8856	16362	0.034	WBT	556
8856	8857	8848	2098	0.034	EBL	71
8856	8857	8855	13058	0.034	EBT	444
8897	8857	8848	1144	0.034	NBT	39
8897	8857	8855	11347	0.034	NBR	386
8897	8857	8856	6245	0.034	NBL	212
Leucadia Blvd/Clark Ave						
1068	8855	1091	15	0.034	SBT	1
1068	8855	8857	319	0.034	SBR	11
1068	8855	8858	0	0.034	SBL	0
1091	8855	1068	16	0.034	NBT	1
1091	8855	8857	479	0.034	NBL	16
1091	8855	8858	0	0.034	NBR	0
8857	8855	1068	1684	0.034	EBL	57
8857	8855	1091	1974	0.034	EBR	67
8857	8855	8858	20748	0.034	EBT	705
8858	8855	1068	986	0.034	WBR	34
8858	8855	1091	0	0.034	WBL	0
8858	8855	8857	20711	0.034	WBT	704
Leucadia Blvd/Saxony Rd						
8838	8859	8851	1920	0.034	SBL	65
8838	8859	8858	587	0.034	SBR	20
8838	8859	8891	6084	0.034	SBT	207
8851	8859	8838	91	0.034	WBR	3
8851	8859	8858	20084	0.034	WBT	683
8851	8859	8891	5301	0.034	WBL	180
8858	8859	8838	904	0.034	EBL	31
8858	8859	8851	18710	0.034	EBT	636
8858	8859	8891	1134	0.034	EBR	39
8891	8859	8838	1651	0.034	NBT	56
8891	8859	8851	6430	0.034	NBR	219
8891	8859	8858	1026	0.034	NBL	35
Leucadia Blvd/Sidonia St						
1076	8851	1090	20	0.034	SBT	1
1076	8851	8849	705	0.034	SBL	24
1076	8851	8859	500	0.034	SBR	17
1090	8851	1076	8	0.034	NBT	0
1090	8851	8849	256	0.034	NBR	9

2010 PM

FROM	THRU	TO	Combined Purpose	Peak Hour Factor	Movement	Total Peak Hour
1090	8851	8859	57	0.034	NBL	2
8849	8851	1076	1154	0.034	WBR	39
8849	8851	1090	0	0.034	WBL	0
8849	8851	8859	24918	0.034	WBT	847
8859	8851	1076	882	0.034	EBL	30
8859	8851	1090	0	0.034	EBR	0
8859	8851	8849	26177	0.034	EBT	890

FROM	THRU	TO	Combined Purpose	Peak Hour Factor	Movement	Total Peak Hour
Leucadia Blvd/Quail Gardens Dr						
8818	8849	8822	1875	0.034	WBR	64
8818	8849	8851	24977	0.034	WBT	849
8818	8849	8871	10227	0.034	WBL	348
8822	8849	8818	516	0.034	SBL	18
8822	8849	8851	0	0.034	SBR	0
8822	8849	8871	358	0.034	SBT	12
8851	8849	8818	24228	0.034	EBT	824
8851	8849	8822	18	0.034	EBL	1
8851	8849	8871	2892	0.034	EBR	98
8871	8849	8818	4048	0.034	NBR	138
8871	8849	8822	612	0.034	NBT	21
8871	8849	8851	1095	0.034	NBL	37
Leucadia Blvd/Garden View Rd						
8786	8818	8829	930	0.034	SBL	32
8786	8818	8849	9225	0.034	SBR	314
8786	8818	8905	10804	0.034	SBT	367
8829	8818	8786	359	0.034	WBR	12
8829	8818	8849	24101	0.034	WBT	819
8829	8818	8905	1325	0.034	WBL	45
8849	8818	8786	6371	0.034	EBL	217
8849	8818	8829	19674	0.034	EBT	669
8849	8818	8905	2748	0.034	EBR	93
8905	8818	8786	2226	0.034	NBT	76
8905	8818	8829	143	0.034	NBR	5
8905	8818	8849	3754	0.034	NBL	128
Leucadia Blvd/Town Center Pl						
1073	8829	1083	1742	0.034	SBT	59
1073	8829	8818	7069	0.034	SBR	240
1073	8829	8834	0	0.034	SBL	0
1083	8829	1073	1758	0.034	NBT	60
1083	8829	8818	3877	0.034	NBL	132
1083	8829	8834	7651	0.034	NBR	260
8818	8829	1073	2004	0.034	EBL	68
8818	8829	1083	1557	0.034	EBR	53
8818	8829	8834	17186	0.034	EBT	584
8834	8829	1073	0	0.034	WBR	0
8834	8829	1083	3028	0.034	WBL	103
8834	8829	8818	14839	0.034	WBT	505
Olivenhain Rd/Amargosa Dr						
4287	22196	8820	0	0.034	SBL	0
4287	22196	8865	35	0.034	SBT	1
4287	22196	22197	1109	0.034	SBR	38
8820	22196	4287	0	0.034	WBR	0
8820	22196	8865	582	0.034	WBL	20
8820	22196	22197	23992	0.034	WBT	816
8865	22196	4287	95	0.034	NBT	3
8865	22196	8820	541	0.034	NBR	18
8865	22196	22197	432	0.034	NBL	15
22197	22196	4287	6570	0.034	EBL	223
22197	22196	8820	39288	0.034	EBT	1336
22197	22196	8865	2161	0.034	EBR	73
Camino De Los Coches/La Costa Ave						
1051	8723	8729	2807	0.034	WBT	95
1051	8723	8740	689	0.034	WBL	23
8729	8723	1051	4086	0.034	EBT	139
8729	8723	8740	6927	0.034	EBR	236
8740	8723	1051	536	0.034	NBR	18
8740	8723	8729	4494	0.034	NBL	153
San Elijo Road/Melrose Dr						
8517	8540	8529	1759	0.034	SBR	60

2010 PM

FROM	THRU	TO	Combined Purpose	Peak Hour Factor	Movement	Total Peak Hour
8517	8540	8574	10235	0.034	SBL	348
8529	8540	8517	1844	0.034	EBL	63
8529	8540	8574	18012	0.034	EBT	612
8574	8540	8517	7060	0.034	WBR	240
8574	8540	8529	16628	0.034	WBT	565
San Elijo Road/Fallsview Road						
999	8574	8540	999	0.034	NBL	34
999	8574	8578	843	0.034	NBR	29
8540	8574	999	3217	0.034	EBR	109
8540	8574	8578	25030	0.034	EBT	851
8578	8574	999	1895	0.034	WBL	64
8578	8574	8540	22689	0.034	WBT	771

Note:
Based on data provided by SANDAG

APPENDIX A, B & C

INPUTS AND ASSUMPTIONS
FOR INTERSECTION CAPACITY ANALYSIS
USING THE HIGHWAY CAPACITY MANUAL (HCM) METHOD

- ☐ Arrival Type = 3-5 (Arrival type 5 used at all locations).
- ☐ Cycle Length (C) = Min. 120-140 seconds (as determined by City Traffic Engineer).
- ☐ Ideal Saturation Flow Rate for HCM software = 1,800 pcphpl left-turns, 2,000 pcphpl through movements.
- ☐ Yellow Interval = 4 sec.
- ☐ All – Red = 1 sec.
- ☐ Minimum Heavy Vehicles = 2%.
- ☐ Peak Hour Factor (PHF) = 0.95.
- ☐ I-Value = 1.00 (If lower than 1.00 additional data provided to quantify the upstream V/C of contributing lane groups).

Note: For major intersections, an extra data page is provided showing the Saturation Flow Rate and I-Value used.

TABLE 6-4

Year 2010 Intersection Levels of Service Summary

	Intersection	Year 2010				Year 2010 + Project							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		∇	S	PM Peak Hour		∇	S
		Delay	LOS	Delay	LOS	Delay	LOS			Delay	LOS		
1	Rancho Santa Fe Rd. / San Marcos Blvd.	49.3	D	145.4	F	49.6	D	0.3	N	146.9	F	1.5	N
2	Rancho Santa Fe Rd. / Lake San Marcos Dr.	23.2	C	13.8	B	23.9	C	0.7	N	13.9	B	0.1	N
3	Rancho Santa Fe Rd. / Camino Del Arroyo Dr.	22.4	C	24.4	C	22.9	C	0.5	N	25.2	C	0.8	N
4	Rancho Santa Fe Rd. / Island Dr.	2.9	A	2.5	A	2.9	A	0.0	N	2.5	A	0.0	N
5	Melrose Dr. / Palomar Airport Rd.	47.3	D	46.1	D	47.4	D	0.1	N	48.3	D	2.2	N
6	Melrose Dr. / Rancho Bravado	15.7	B	13.7	B	16.0	B	0.2	N	13.9	B	0.2	N
7	Melrose Dr. / Poinsettia Ln./Paseo Corto	21.7	C	21.0	C	21.9	C	0.1	N	21.1	C	0.1	N
8	Melrose Dr. / Carillo Wy.	16.9	B	16.5	B	17.5	B	0.6	N	17.1	B	0.6	N
9	Melrose Dr. / Alga Rd.	27.1	C	24.3	C	27.5	C	0.5	N	25.8	C	2.5	N
10	Rancho Santa Fe Rd. / Melrose Dr.	43.9	D	35.0	D	46.8	D	2.4	N	36.3	D	1.3	N
11	Rancho Santa Fe Rd. / San Elijo Rd.	36.2	D	32.2	C	39.5	D	3.3	N	36.9	D	4.7	N
12	Rancho Santa Fe Rd. / Camino Junipero	10.1	B	11.7	B	10.8	B	0.7	N	13.2	B	1.5	N
13	Rancho Santa Fe Rd. / La Costa Ave.	33.0	C	33.6	C	39.6	D	6.8	N	41.3	D	7.7	N
14	Rancho Santa Fe Rd. / Camino De Los Coches	7.4	A	5.7	A	7.1	A	0.0	N	5.2	A	0.0	N
15	Rancho Santa Fe Rd. / Calle Barcelona	21.8	C	17.3	B	22.8	C	1.0	N	18.4	B	1.1	N
16	Rancho Santa Fe Rd. / Olivenhain Rd.	27.3	C	26.5	C	32.3	C	5.1	N	33.4	C	6.9	N
17	Rancho Santa Fe Rd. / El Camino Del Norte ①	72.6	F	27.7	D	84.8	F	12.2	Y	41.9	E	14.2	Y
18	El Camino Real / Aviara Pkwy/Alga Rd.	32.8	C	51.0	D	33.1	C	0.3	N	53.8	D	2.8	N
19	El Camino Real / Costa Del Mar Rd.	7.4	A	6.2	A	7.7	A	0.3	N	6.2	A	0.0	N
20	I-5 SB Ramps / La Costa Ave.	33.4	C	22.0	C	34.8	C	1.4	N	22.3	C	0.3	N
21	I-5 NB Ramps / La Costa Ave.	13.5	B	18.4	B	13.6	B	0.1	N	18.9	B	0.5	N
22	Piraeus St. / La Costa Ave.	4.7	A	4.6	A	4.7	A	0.0	N	4.6	A	0.0	N
23	Saxony Rd. / La Costa Ave.	4.2	A	4.8	A	4.2	A	0.0	N	4.8	A	0.0	N
24	El Camino Real / La Costa Ave.	45.5	D	52.6	D	45.7	D	0.2	N	54.2	D	1.6	N
25	Viejo Castilla Wy. / La Costa Ave.	6.0	A	7.6	A	5.7	A	0.0	N	7.2	A	0.0	N
26	Romeria St. / La Costa Ave.	11.9	B	6.7	B	12.6	B	1.0	N	10.1	B	3.4	N

TABLE 6-4 (Continued)

	Intersection	Year 2010				Year 2010 + Project							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		∇	S	PM Peak Hour		∇	S
		D	LOS	D	LOS	D	LOS			D	LOS		
27	Cadencia St. / La Costa Ave.	8.4	A	14.9	B	9.4	A	1.0	N	20.4	C	5.5	N
28	I-5 SB Ramps / Leucadia Blvd.	22.8	C	20.3	C	23.4	C	0.6	N	21.4	C	1.1	N
29	I-5 NB Ramps / Leucadia Blvd.	35.0	D	20.6	C	35.1	D	0.1	N	21.8	C	1.2	N
30	Clark Ave. / Leucadia Blvd.	20.0	C	20.1	C	20.3	C	0.3	N	22.5	C	2.4	N
31	Saxony Rd. / Leucadia Blvd.	37.1	D	29.8	C	40.8	D	3.7	N	31.9	C	2.1	N
32	Sidonia St. / Leucadia Blvd.	6.8	A	7.1	A	7.0	A	0.2	N	8.3	A	1.2	N
33	Quail Gardens Dr. / Leucadia Blvd.	31.6	C	32.1	C	33.9	C	2.6	N	39.5	D	7.4	N
34	Garden View Rd. / Leucadia Blvd.	27.7	C	35.5	D	28.2	C	0.6	N	37.3	D	1.8	N
35	Town Center Pl. / Leucadia Blvd.	19.5	B	30.6	C	19.5	B	0.0	N	30.2	C	0.0	N
36	El Camino Real / Leucadia Blvd.	50.2	D	35.7	D	51.7	D	1.5	N	36.5	D	0.8	N
37	Amargosa Dr. / Olivenhain Rd.	22.6	C	25.2	C	27.1	C	4.7	N	40.7	D	15.5	N
38	Calle Timiteo (Driveway) #2 / La Costa Ave. ④	14.1	B	12.0	B	21.2	C	7.6	N	19.9	C	7.9	N
39	Camino De Los Coches / La Costa Ave. ⑤	12.3	B	11.3	B	15.8	B	3.5	N	17.0	B	5.7	N
40	San Elijo Rd. / Melrose Rd.	33.6	C	33.4	C	34.2	C	0.6	N	33.5	C	0.1	N
41	San Elijo Rd. / Fallsview Rd. ⑦	11.7	B	12.5	B	11.9	B	0.2	N	13.0	B	0.5	N
42	La Costa Ave. / West Driveway #1 ⑥	11.9	B	11.5	B	25.0	C	13.2	N	33.6	C	22.1	N
43	La Costa Ave / East Dwy #3/Paseo Tamarindo③	---	---	---	---	9.5	A	---	N	8.9	A	---	N
44	Rancho Santa Fe Rd / West Driveway #4/ ②	---	---	---	---	---	A	---	N	---	A	---	N
45	Rancho Santa Fe Rd / East Driveway #5 ⑧	3.0	A	3.0	A	22.8	C	19.8	N	37.4	D	34.4	N
46	Rancho Santa Fe Rd. / Calle Acervo	43.6	D	22.4	C	49.1	D	5.5	N	29.5	C	7.1	N

Note: A significant impact occurs at LOS "E" or "F" if project increases intersection delay by more than 2.0 seconds.

∇ = Change in delay.
D = Delay in seconds.
LOS = Level of Service.
(S) = Significant Impact Due to Project.
① = All-Way-Stop Control within City of Encinitas. Encinitas will not allow intersection improvements.
② = Right-In Only for Northbound Traffic. No Conflicting Movements.
③ = Stop Sign facing Southbound Traffic. No Intersection Without Project.
④ = Stop Sign remains with no project; project installs traffic signal.
⑤ = Stop Sign remains with no project; project installs a traffic signal; T.I.F. Fair-Share Reimbursement.
⑥ = Stop Sign remains with no project; project installs traffic signal.
⑦ = Right-Turn In-Out Only. Stop Sign Facing Northbound Traffic.
⑧ = Provide Westbound Dual-Left Turn Lanes

Unsignalized		Signalized	
Delay	LOS	Delay	LOS
0.00 - 10.0	A	0.00 - 10.0	A
10.1 - 15.0	B	10.1 - 20.0	B
15.1 - 25.0	C	20.1 - 35.0	C
25.1 - 35.0	D	35.1 - 55.0	D
35.1 - 50.0	E	55.1 - 80.0	E
Over 50.0	F	Over 80.0	F

1-A
2010 NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE. RD./SAN MARCOS B
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	SAN MARCOS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	0	2	2	0	1	2	1
Lane group	L	T	R	L	TR		L	T		L	T	R
Volume (vph)	264	654	60	346	1342	69	125	856		78	263	463
% Heavy veh	2	2	2	2	2	2	2	2		2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5		5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0	0	0	0	0			0	0	200
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 16.0	G = 49.0	G =	G =	G = 10.0	G = 35.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	278	688	63	364	1486		132	901		82	277	277
Lane group cap.	401	1407	738	422	1397		250	1005		129	1005	404
v/c ratio	0.69	0.49	0.09	0.86	1.06		0.53	0.90		0.64	0.28	0.69
Green ratio	0.12	0.38	0.49	0.12	0.38		0.08	0.27		0.08	0.27	0.27
Unif. delay d1	54.6	30.9	17.5	55.9	40.5		57.7	45.8		58.2	37.5	42.6
Delay factor k	0.26	0.11	0.11	0.39	0.50		0.13	0.42		0.22	0.11	0.25
Increm. delay d2	5.1	0.3	0.1	16.6	43.0		2.1	10.6		9.9	0.1	4.8
PF factor	0.906	0.597	0.354	0.906	0.597		0.944	0.754		0.944	0.754	0.754
Control delay	54.6	18.7	6.2	67.3	67.2		56.6	45.1		64.9	28.4	36.9
Lane group LOS	D	B	A	E	E		E	D		E	C	D
Apprch. delay	27.7			67.2			46.6			36.8		
Approach LOS	C			E			D			D		
Intersec. delay	49.3			Intersection LOS						D		

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1-A
2010 NP

Urban Systems Inc.
4540 Kearny Villa Rd.
San Diego Ca 92123

Phone: 858-560-4911 Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst:	USAI
Agency/Co.:	USAI
Date Performed:	09/10/08
Analysis Time Period:	AM PEAK HOUR
Intersection:	RHO. STA. FE. RD./SAN MARCOS B
Area Type:	All other areas
Jurisdiction:	SAN MARCOS
Analysis Year:	YEAR 2010 NO PROJECT

Project ID: LA COSTA
E/W St: SAN MARCOS DR. N/S St: RANCHO SANTA FE RD.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	264	654	60	346	1342	69	125	856		78	263	463
% Heavy Veh	2	2	2	2	2	2	2	2		2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95
PK 15 Vol	69	172	16	91	353	18	33	225		21	69	122
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000	1800	1800	2000		1800	2000		1800	2000	1800
ParkExist												
NumPark												
No. Lanes	2	2	1	2	2	0	2	2	0	1	2	1
LGConfig	L	T	R	L	TR		L	T		L	T	R
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
RTOR Vol			0			0						200
Adj Flow	278	688	63	364	1486		132	901		82	277	277
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.000	1.000		0.049			0.000			0.000	1.000
Peds Bikes	0			0		0	0			0		0
Buses	0	0	0	0	0		0	0		0	0	0
%InProtPhase												

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Arriv. Type	5	5	5	5	5		5	5		5	5	5
Unit Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext of g	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ped Min g		3.2			3.2			3.2			3.2	

1-P
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE. RD./SAN MARCOS B
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	SAN MARCOS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	0	2	2	0	1	2	1
Lane group	L	T	R	L	TR		L	T		L	T	R
Volume (vph)	301	1339	183	841	649	131	135	414		145	1006	328
% Heavy veh	2	2	2	2	2	2	2	2		2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5		5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0			0	0	200
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 5.0	G = 25.0	G = 40.0	G =	G = 10.0	G = 35.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	317	1409	193	885	821		142	436		153	1059	135
Lane group cap.	116	1067	589	857	1820		233	933		120	933	375
v/c ratio	2.73	1.32	0.33	1.03	0.45		0.61	0.47		1.27	1.14	0.36
Green ratio	0.04	0.29	0.39	0.25	0.50		0.07	0.25		0.07	0.25	0.25
Unif. delay d1	67.5	50.0	29.6	52.5	22.6		63.1	44.6		65.0	52.5	43.3
Delay factor k	0.50	0.50	0.11	0.50	0.11		0.20	0.11		0.50	0.50	0.11
Increm. delay d2	803.5	150.9	0.3	39.4	0.2		4.6	0.4		173.4	74.1	0.6
PF factor	0.975	0.733	0.569	0.778	0.333		0.949	0.778		0.949	0.778	0.778
Control delay	869.3	187.5	17.2	80.3	7.7		64.5	35.0		235.1	114.9	34.2
Lane group LOS	F	F	B	F	A		E	D		F	F	C
Apprch. delay	283.0			45.4			42.3			120.5		
Approach LOS	F			D			D			F		
Intersec. delay	145.4			Intersection LOS						F		

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1-P
2010
NP

Urban Systems Inc.
4540 Kearny Villa Rd.
San Diego Ca 92123

Phone: 858-560-4911 Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst:	USAI
Agency/Co.:	USAI
Date Performed:	09/10/08
Analysis Time Period:	PM PEAK HOUR
Intersection:	RHO. STA. FE. RD./SAN MARCOS B
Area Type:	All other areas
Jurisdiction:	SAN MARCOS
Analysis Year:	YEAR 2010 NO PROJECT
Project ID: LA COSTA	
E/W St: SAN MARCOS DR.	N/S St: RANCHO SANTA FE RD.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	301	1339	183	841	649	131	135	414		145	1006	328
% Heavy Veh	2	2	2	2	2	2	2	2		2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95
PK 15 Vol	79	352	48	221	171	34	36	109		38	265	86
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000	1800	1800	2000		1800	2000		1800	2000	1800
ParkExist												
NumPark												
No. Lanes	2	2	1	2	2	0	2	2	0	1	2	1
LGConfig	L	T	R	L	TR		L	T		L	T	R
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
RTOR Vol			0			0						200
Adj Flow	317	1409	193	885	821		142	436		153	1059	135
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.000	1.000		0.168			0.000			0.000	1.000
Peds	0		0	0		0	0			0		0
Bikes												
Buses	0	0	0	0	0		0	0		0	0	0
%InProtPhase			0.0									

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Arriv. Type	5	5	5	5	5		5	5		5	5	5
Unit Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext of g	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ped Min g		3.2			3.2			3.2			3.2	

2-A 2010 NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./LAKE SAN MARC
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	SAN MARCOS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	1	0	1	0	2	0	1	2	0
Lane group				L		R		TR		L	T	
Volume (vph)				179		141		1741	69	125	611	
% Heavy veh				2		2		2	2	2	2	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				4		5		4		4	4	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0			0		0	0	0	0			
Lane Width				10.0		14.0		15.0		10.0	15.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 18.0	G =	G =	G =	G = 20.0	G = 53.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 105.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				188		148		1906		132	643	
Lane group cap.				268		274		2061		298	3051	
v/c ratio				0.70		0.54		0.92		0.44	0.21	
Green ratio				0.17		0.17		0.50		0.19	0.74	
Unif. delay d1				41.0		39.7		24.1		37.6	4.1	
Delay factor k				0.27		0.14		0.44		0.11	0.11	
Increm. delay d2				8.0		2.2		7.7		1.1	0.0	
PF factor				1.000		0.862		0.759		1.000	0.224	
Control delay				48.9		36.4		26.1		38.6	1.0	
Lane group LOS				D		D		C		D	A	
Apprch. delay				43.4			26.1			7.4		
Approach LOS				D			C			A		
Intersec. delay	23.2			Intersection LOS						C		

2-P
2d0
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./LAKE SAN MARC
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	SAN MARCOS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	1	0	1	0	2	0	1	2	0
Lane group				L		R		TR		L	T	
Volume (vph)				100		135		865	141	265	1874	
% Heavy veh				2		2		2	2	2	2	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				4		5		4		4	4	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0			0		0	0	0	0			
Lane Width				10.0		14.0		15.0		10.0	15.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 18.0	G =	G =	G =	G = 20.0	G = 53.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 105.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				105		142		1059		279	1973	
Lane group cap.				268		274		2030		298	3051	
v/c ratio				0.39		0.52		0.52		0.94	0.65	
Green ratio				0.17		0.17		0.50		0.19	0.74	
Unif. delay d1				38.6		39.6		17.5		41.9	6.7	
Delay factor k				0.11		0.12		0.13		0.45	0.22	
Increm. delay d2				0.9		1.7		0.2		35.6	0.5	
PF factor				1.000		0.862		0.759		1.000	0.224	
Control delay				39.6		35.8		13.5		77.5	2.0	
Lane group LOS				D		D		B		E	A	
Apprch. delay				37.4			13.5			11.3		
Approach LOS				D			B			B		
Intersec. delay	13.8			Intersection LOS						B		

3-A
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*RHO. STA. FE DR./CAM DEL ARROY*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*09/10/08*	Jurisdiction	*SAN MARCOS*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2010 NO PROJECT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*0*	*1*	*0*	*0*	*1*	*0*	*1*	*2*	*0*	*1*	*2*	*0*
Lane group		*LTR*			*LTR*		*L*	*TR*		*L*	*TR*	
Volume (vph)	*30*	*8*	*57*	*97*	*2*	*95*	*17*	*1650*	*40*	*93*	*529*	*15*
% Heavy veh	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Actuated (P/A)	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*
Startup lost time		*2.0*			*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	
Ext. eff. green		*2.0*			*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	
Arrival type		*4*			*4*		*4*	*4*		*4*	*4*	
Unit Extension		*3.0*			*3.0*		*3.0*	*3.0*		*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*0*	*0*	*0*	*50*	*0*	*0*	*0*	*0*	*0*	*0*
Lane Width		*12.0*			*12.0*		*10.0*	*15.0*		*10.0*	*15.0*	
Parking/Grade/Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking/hr												
Bus stops/hr		*0*			*0*		*0*	*0*		*0*	*0*	
Unit Extension		*3.0*			*3.0*		*3.0*	*3.0*		*3.0*	*3.0*	

Phasing	EW Perm	02	03	04	Excl. Left	Thru & RT	07	08
Timing	G = *20.0*	G =	G =	G =	G = *20.0*	G = *56.0*	G =	G =
	Y = *4*	Y =	Y =	Y =	Y = *5*	Y = *5*	Y =	Y =

Duration of Analysis (hrs) = *0.25* | Cycle Length C = *110.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		*100*			*151*		*18*	*1779*		*98*	*573*	
Lane group cap.		*262*			*219*		*285*	*2083*		*285*	*2082*	
v/c ratio		*0.38*			*0.69*		*0.06*	*0.85*		*0.34*	*0.28*	
Green ratio		*0.18*			*0.18*		*0.18*	*0.51*		*0.18*	*0.51*	
Unif. delay d1		*39.6*			*42.1*		*37.2*	*23.5*		*39.3*	*15.4*	
Delay factor k		*0.11*			*0.26*		*0.11*	*0.39*		*0.11*	*0.11*	
Increm. delay d2		*0.9*			*8.9*		*0.1*	*3.7*		*0.7*	*0.1*	
PF factor		*1.000*			*1.000*		*1.000*	*0.752*		*1.000*	*0.752*	
Control delay		*40.5*			*50.9*		*37.3*	*21.3*		*40.0*	*11.7*	
Lane group LOS		*D*			*D*		*D*	*C*		*D*	*B*	
Apprch. delay	*40.5*			*50.9*			*21.5*			*15.8*		
Approach LOS	*D*			*D*			*C*			*B*		
Intersec. delay	*22.4*			Intersection LOS						*C*		

3-P
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*RHO. STA. FE DR./CAM DEL ARROY*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*09/10/08*	Jurisdiction	*SAN MARCOS*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2010 NO PROJECT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*0*	*1*	*0*	*0*	*1*	*0*	*1*	*2*	*0*	*1*	*2*	*0*
Lane group		*LTR*			*LTR*		*L*	*TR*		*L*	*TR*	
Volume (vph)	*35*	*7*	*7*	*75*	*16*	*205*	*28*	*666*	*43*	*189*	*1684*	*25*
% Heavy veh	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Actuated (P/A)	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*
Startup lost time		*2.0*			*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	
Ext. eff. green		*2.0*			*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	
Arrival type		*4*			*4*		*4*	*4*		*4*	*4*	
Unit Extension		*3.0*			*3.0*		*3.0*	*3.0*		*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*0*	*0*	*0*	*100*	*0*	*0*	*0*	*0*	*0*	*0*
Lane Width		*12.0*			*12.0*		*10.0*	*15.0*		*10.0*	*15.0*	
Parking/Grade/Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking/hr												
Bus stops/hr		*0*			*0*		*0*	*0*		*0*	*0*	
Unit Extension		*3.0*			*3.0*		*3.0*	*3.0*		*3.0*	*3.0*	

Phasing	EW Perm	02	03	04	Excl. Left	Thru & RT	07	08
Timing	G = *20.0*	G =	G =	G =	G = *20.0*	G = *56.0*	G =	G =
	Y = *4*	Y =	Y =	Y =	Y = *5*	Y = *5*	Y =	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *110.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		*51*			*207*		*29*	*746*		*199*	*1799*	
Lane group cap.		*216*			*256*		*285*	*2072*		*285*	*2086*	
v/c ratio		*0.24*			*0.81*		*0.10*	*0.36*		*0.70*	*0.86*	
Green ratio		*0.18*			*0.18*		*0.18*	*0.51*		*0.18*	*0.51*	
Unif. delay d1		*38.5*			*43.2*		*37.5*	*16.2*		*42.2*	*23.6*	
Delay factor k		*0.11*			*0.35*		*0.11*	*0.11*		*0.26*	*0.39*	
Increm. delay d2		*0.6*			*17.3*		*0.2*	*0.1*		*7.3*	*4.0*	
PF factor		*1.000*			*1.000*		*1.000*	*0.752*		*1.000*	*0.752*	
Control delay		*39.0*			*60.5*		*37.7*	*12.3*		*49.5*	*21.8*	
Lane group LOS		*D*			*E*		*D*	*B*		*D*	*C*	
Apprch. delay	*39.0*			*60.5*			*13.3*			*24.5*		
Approach LOS	*D*			*E*			*B*			*C*		
Intersec. delay	*24.4*			Intersection LOS						*C*		

4-A
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./ISLAND DR.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	SAN MARCOS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	0	1	0	0	0	1	2	0	0	2	0
Lane group	L		R				L	T			TR	
Volume (vph)	30		60				25	1127			1530	40
% Heavy veh	2		2				2	2			2	2
PHF	0.95		0.95				0.95	0.95			0.95	0.95
Actuated (P/A)	A	A	A				A	A			A	A
Startup lost time	2.0		2.0				2.0	2.0			2.0	
Ext. eff. green	2.0		2.0				2.0	2.0			2.0	
Arrival type	5		5				5	5			5	
Unit Extension	3.0		3.0				3.0	3.0			3.0	
Ped/Bike/RTOR Volume	0	0	25	0						0	0	0
Lane Width	10.0		10.0				10.0	15.0			15.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0		0				0	0			0	
Unit Extension	3.0		3.0				3.0	3.0			3.0	

Phasing	EB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 8.0	G =	G =	G =	G = 19.0	G = 60.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 100.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	32		37				26	1186			1653	
Lane group cap.	125		112				297	3409			2455	
v/c ratio	0.26		0.33				0.09	0.35			0.67	
Green ratio	0.08		0.08				0.19	0.83			0.60	
Unif. delay d1	43.2		43.5				33.4	2.0			13.4	
Delay factor k	0.11		0.11				0.11	0.11			0.25	
Increm. delay d2	1.1		1.7				0.1	0.1			0.7	
PF factor	0.942		0.942				0.844	0.294			0.125	
Control delay	41.8		42.7				28.3	0.7			2.4	
Lane group LOS	D		D				C	A			A	
Apprch. delay	42.3						1.3			2.4		
Approach LOS	D						A			A		
Intersec. delay	2.9			Intersection LOS						A		

4-P
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./ISLAND DR.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	SAN MARCOS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	0	1	0	0	0	1	2	0	0	2	0
Lane group	L		R				L	T			TR	
Volume (vph)	58		35				30	1509			1000	50
% Heavy veh	2		2				2	2			2	2
PHF	0.95		0.95				0.95	0.95			0.95	0.95
Actuated (P/A)	A	A	A				A	A			A	A
Startup lost time	2.0		2.0				2.0	2.0			2.0	
Ext. eff. green	2.0		2.0				2.0	2.0			2.0	
Arrival type	5		5				5	5			5	
Unit Extension	3.0		3.0				3.0	3.0			3.0	
Ped/Bike/RTOR Volume	0	0	25	0						0	0	0
Lane Width	10.0		10.0				10.0	15.0			15.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0		0				0	0			0	
Unit Extension	3.0		3.0				3.0	3.0			3.0	

Phasing	EB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 8.0	G =	G =	G =	G = 19.0	G = 60.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 100.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	61		11				32	1588			1106	
Lane group cap.	125		112				297	3409			2446	
v/c ratio	0.49		0.10				0.11	0.47			0.45	
Green ratio	0.08		0.08				0.19	0.83			0.60	
Unif. delay d1	44.0		42.7				33.5	2.4			11.0	
Delay factor k	0.11		0.11				0.11	0.11			0.11	
Increm. delay d2	3.0		0.4				0.2	0.1			0.1	
PF factor	0.942		0.942				0.844	0.294			0.125	
Control delay	44.5		40.6				28.4	0.8			1.5	
Lane group LOS	D		D				C	A			A	
Apprch. delay	43.9						1.3			1.5		
Approach LOS	D						A			A		
Intersec. delay	2.5			Intersection LOS						A		

5-A
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ PALOMAR AIRPOR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	CARLSBAD
Time Period	2010 AM PEAK	Analysis Year	YEAR 2010 NO PROJ.

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	4	1	2	3	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	746	925	134	250	1540	232	543	1492	405	113	324	814
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	310
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 33.2	G = 39.3	G = 0.0	G =	G = 7.4	G = 13.9	G = 21.2	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	785	974	141	263	1621	244	572	1571	426	119	341	531
Lane group cap.	772	1499	752	772	1569	551	612	2040	831	172	809	630
v/c ratio	1.02	0.65	0.19	0.34	1.03	0.44	0.93	0.77	0.51	0.69	0.42	0.84
Green ratio	0.24	0.28	0.50	0.24	0.28	0.37	0.19	0.29	0.56	0.05	0.15	0.42
Unif. delay d1	53.4	44.3	19.0	44.3	50.4	33.3	56.0	45.7	19.1	65.2	53.8	36.1
Delay factor k	0.50	0.23	0.11	0.11	0.50	0.11	0.45	0.32	0.12	0.26	0.11	0.38
Increm. delay d2	36.7	1.0	0.1	0.3	31.7	0.6	21.7	1.9	0.5	11.3	0.4	10.1
PF factor	0.793	0.740	0.322	0.793	0.740	0.610	0.846	0.732	0.154	0.963	0.881	0.509
Control delay	79.0	33.8	6.2	35.4	69.0	20.9	69.1	35.4	3.5	74.0	47.8	28.5
Lane group LOS	E	C	A	D	E	C	E	D	A	E	D	C
Apprch. delay	50.4			59.3			37.6			40.6		
Approach LOS	D			E			D			D		
Intersec. delay	47.3			Intersection LOS						D		

5-P
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ PALOMAR AIRPOR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	950	1345	310	398	1129	75	119	456	225	114	1182	815
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	345
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	EB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 7.0	G = 33.0	G =	G = 12.0	G = 33.0	G =	G =
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1000	1416	326	419	1188	79	125	480	237	120	1244	495
Lane group cap.	977	1717	482	698	1259	536	279	1259	729	279	1259	857
v/c ratio	1.02	0.82	0.68	0.60	0.94	0.15	0.45	0.38	0.33	0.43	0.99	0.58
Green ratio	0.30	0.32	0.32	0.21	0.24	0.36	0.09	0.24	0.49	0.09	0.24	0.57
Unif. delay d1	49.0	43.9	41.2	49.6	52.6	30.5	60.9	44.9	22.0	60.8	53.3	19.2
Delay factor k	0.50	0.36	0.25	0.19	0.46	0.11	0.11	0.11	0.11	0.11	0.49	0.17
Increm. delay d2	34.9	3.4	3.8	1.4	14.0	0.1	1.1	0.2	0.3	1.1	22.4	1.0
PF factor	0.714	0.684	0.684	0.818	0.794	0.630	0.938	0.794	0.370	0.938	0.794	0.117
Control delay	69.9	33.4	31.9	42.0	55.8	19.4	58.2	35.9	8.4	58.0	64.8	3.2
Lane group LOS	E	C	C	D	E	B	E	D	A	E	E	A
Apprch. delay	46.6			50.7			31.5			48.0		
Approach LOS	D			D			C			D		
Intersec. delay	46.1			Intersection LOS						D		

6-A

2010

NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ RANCHO BRAVADO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	3	0	1	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	34	7	6	136	2	90	3	2316	60	17	686	5
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 15.0	G =	G =	G = 13.0	G = 67.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	36	13		143	97		3	2501		18	727	
Lane group cap.	193	209		193	181		168	2742		168	2749	
v/c ratio	0.19	0.06		0.74	0.54		0.02	0.91		0.11	0.26	
Green ratio	0.12	0.12		0.12	0.12		0.10	0.52		0.10	0.52	
Unif. delay d1	52.0	51.2		55.6	54.2		52.7	28.8		53.2	17.7	
Delay factor k	0.11	0.11		0.30	0.14		0.11	0.43		0.11	0.11	
Increm. delay d2	0.5	0.1		14.2	3.1		0.0	5.2		0.3	0.1	
PF factor	0.913	0.913		0.913	0.913		0.926	0.291		0.926	0.291	
Control delay	47.9	46.9		65.0	52.6		48.9	13.6		49.6	5.2	
Lane group LOS	D	D		E	D		D	B		D	A	
Apprch. delay	47.7			60.0			13.6			6.3		
Approach LOS	D			E			B			A		
Intersec. delay	15.7			Intersection LOS						B		

6-P

2010

NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ RANCHO BRAVADO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	3	0	1	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	6	4	4	53	1	46	16	748	126	78	1800	12
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 20.0	G =	G =	G = 13.0	G = 62.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	6	8		56	49		17	920		82	1908	
Lane group cap.	193	278		193	242		168	2490		168	2543	
v/c ratio	0.03	0.03		0.29	0.20		0.10	0.37		0.49	0.75	
Green ratio	0.12	0.15		0.12	0.15		0.10	0.48		0.10	0.48	
Unif. delay d1	51.0	46.7		52.6	48.0		53.2	21.6		55.4	27.7	
Delay factor k	0.11	0.11		0.11	0.11		0.11	0.11		0.11	0.31	
Increm. delay d2	0.1	0.0		0.8	0.4		0.3	0.1		2.2	1.3	
PF factor	0.913	0.879		0.913	0.879		0.926	0.392		0.926	0.392	
Control delay	46.7	41.1		48.9	42.6		49.5	8.6		53.5	12.1	
Lane group LOS	D	D		D	D		D	A		D	B	
Apprch. delay	43.5			46.0			9.3			13.8		
Approach LOS	D			D			A			B		
Intersec. delay	13.7			Intersection LOS						B		

7-A
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*MELROSE DR.@ POINSETTIA LANE*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*09/10/08*	Jurisdiction	*CARLSBAD*
Time Period	*AM PEAK*	Analysis Year	*YEAR 2010 NO PROJECT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	1	1	1	1	0	2	3	0	1	3	1
Lane group	L	T	R	L	TR		L	TR		L	T	R
Volume (vph)	535	8	6	23	26	53	31	1791	10	20	635	171
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5		5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 14.0	G =	G =	G = 10.0	G = 56.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	563	8	6	24	83		33	1896		21	668	180
Lane group cap.	751	211	1024	387	179		250	2299		129	2300	1046
v/c ratio	0.75	0.04	0.01	0.06	0.46		0.13	0.82		0.16	0.29	0.17
Green ratio	0.23	0.11	0.69	0.23	0.11		0.08	0.43		0.08	0.43	0.70
Unif. delay d1	46.5	52.0	6.2	39.0	54.5		56.0	32.7		56.1	24.1	6.7
Delay factor k	0.30	0.11	0.11	0.11	0.11		0.11	0.36		0.11	0.11	0.11
Increm. delay d2	4.2	0.1	0.0	0.1	1.9		0.2	2.6		0.6	0.1	0.1
PF factor	0.800	0.920	0.163	0.800	0.920		0.944	0.495		0.944	0.495	0.167
Control delay	41.4	47.9	1.0	31.3	52.0		53.1	18.8		53.6	12.0	1.2
Lane group LOS	D	D	A	C	D		D	B		D	B	A
Apprch. delay	41.1			47.3			19.4			10.8		
Approach LOS	D			D			B			B		
Intersec. delay	21.7			Intersection LOS						C		

7-P 2010 NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ POINSETTIA LANE
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	1	1	1	1	0	2	3	0	1	3	1
Lane group	L	T	R	L	TR		L	TR		L	T	R
Volume (vph)	434	37	47	14	11	23	35	433	15	138	1196	523
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5		5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 14.0	G =	G =	G = 15.0	G = 51.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	457	39	49	15	36		37	472		145	1259	551
Lane group cap.	751	211	1024	387	179		376	2084		193	2095	989
v/c ratio	0.61	0.18	0.05	0.04	0.20		0.10	0.23		0.75	0.60	0.56
Green ratio	0.23	0.11	0.69	0.23	0.11		0.12	0.39		0.12	0.39	0.66
Unif. delay d1	44.7	52.8	6.4	38.8	52.9		51.4	26.3		55.7	31.4	11.8
Delay factor k	0.19	0.11	0.11	0.11	0.11		0.11	0.11		0.31	0.19	0.15
Increm. delay d2	1.4	0.4	0.0	0.0	0.6		0.1	0.1		15.2	0.5	0.7
PF factor	0.800	0.920	0.163	0.800	0.920		0.913	0.570		0.913	0.570	0.148
Control delay	37.2	49.0	1.1	31.1	49.2		47.1	15.1		66.0	18.4	2.4
Lane group LOS	D	D	A	C	D		D	B		E	B	A
Apprch. delay	34.8			43.9			17.4			17.4		
Approach LOS	C			D			B			B		
Intersec. delay	21.0			Intersection LOS						C		

8-A
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ CARRILLO WAY
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	CARLSBAD
Time Period	2010 AM PEAK	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	3	0	1	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	130	15	42	23	50	12	107	1690	6	5	640	15
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 17.0	G = 18.0	G =	G =	G = 14.0	G = 61.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	137	60		24	66		113	1785		5	690	
Lane group cap.	219	240		219	250		180	2505		180	2496	
v/c ratio	0.63	0.25		0.11	0.26		0.63	0.71		0.03	0.28	
Green ratio	0.13	0.14		0.13	0.14		0.11	0.47		0.11	0.47	
Unif. delay d1	53.5	50.0		49.8	50.1		55.5	27.5		51.9	21.0	
Delay factor k	0.21	0.11		0.11	0.11		0.21	0.28		0.11	0.11	
Increm. delay d2	5.5	0.5		0.2	0.6		6.8	1.0		0.1	0.1	
PF factor	0.900	0.893		0.900	0.893		0.920	0.411		0.920	0.411	
Control delay	53.7	45.2		45.1	45.3		57.8	12.3		47.8	8.7	
Lane group LOS	D	D		D	D		E	B		D	A	
Apprch. delay	51.1			45.2			15.0			9.0		
Approach LOS	D			D			B			A		
Intersec. delay	16.9			Intersection LOS						B		

8-P
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ CARRILLO WAY
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	CARLSBAD
Time Period	2010 PM PEAK	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	3	0	1	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	145	35	49	12	10	9	32	286	332	54	1084	51
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 17.0	G = 18.0	G =	G =	G = 14.0	G = 61.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	153	89		13	20		34	650		57	1195	
Lane group cap.	219	246		219	239		180	2298		180	2488	
v/c ratio	0.70	0.36		0.06	0.08		0.19	0.28		0.32	0.48	
Green ratio	0.13	0.14		0.13	0.14		0.11	0.47		0.11	0.47	
Unif. delay d1	54.0	50.8		49.5	48.8		52.8	21.1		53.6	23.6	
Delay factor k	0.26	0.11		0.11	0.11		0.11	0.11		0.11	0.11	
Increm. delay d2	9.4	0.9		0.1	0.2		0.5	0.1		1.0	0.1	
PF factor	0.900	0.893		0.900	0.893		0.920	0.411		0.920	0.411	
Control delay	58.1	46.3		44.6	43.7		49.1	8.7		50.3	9.9	
Lane group LOS	E	D		D	D		D	A		D	A	
Apprch. delay	53.7			44.1			10.7			11.7		
Approach LOS	D			D			B			B		
Intersec. delay	16.5			Intersection LOS						B		

9-A
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ ALGA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	1	0	2	3	0	1	3	0
Lane group	L	TR	R	L	TR		L	TR		L	TR	
Volume (vph)	520	5	677	18	18	30	304	1253	3	2	593	110
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5		0	5	0	0	5	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	EW Perm	02	03	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 55.0	G =	G =	G =	G = 5.0	G = 20.0	G = 30.0	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	547	283	435	19	51		320	1322		2	740	
Lane group cap.	539	705	748	412	714		751	2259		64	1202	
v/c ratio	1.01	0.40	0.58	0.05	0.07		0.43	0.59		0.03	0.62	
Green ratio	0.42	0.42	0.50	0.42	0.42		0.23	0.42		0.04	0.23	
Unif. delay d1	37.5	26.1	22.9	22.1	22.3		42.7	28.8		60.2	44.8	
Delay factor k	0.50	0.11	0.17	0.11	0.11		0.11	0.18		0.11	0.20	
Increm. delay d2	42.5	0.4	1.2	0.0	0.0		0.4	0.4		0.2	1.0	
PF factor	0.511	0.511	0.333	0.511	0.511		0.800	0.511		0.973	0.800	
Control delay	61.7	13.7	8.8	11.3	11.4		34.5	15.1		58.8	36.8	
Lane group LOS	E	B	A	B	B		C	B		E	D	
Apprch. delay	32.8			11.4			18.9			36.9		
Approach LOS	C			B			B			D		
Intersec. delay	27.1			Intersection LOS						C		

9-P
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ ALGA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	1	0	2	3	0	1	3	0
Lane group	L	TR	R	L	TR		L	TR		L	TR	
Volume (vph)	200	20	493	15	10	5	677	445	20	42	701	402
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5		0	5	0	0	5		0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	EW Perm	02	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 22.0	G =	G =	G =	G = 29.0	G = 54.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	211	21	519	16	16		713	489		44	1161	
Lane group cap.	241	360	694	239	325		787	2388		405	2271	
v/c ratio	0.88	0.06	0.75	0.07	0.05		0.91	0.20		0.11	0.51	
Green ratio	0.18	0.18	0.47	0.18	0.18		0.24	0.45		0.24	0.45	
Unif. delay d1	47.7	40.4	26.2	40.5	40.4		44.2	20.0		35.4	23.6	
Delay factor k	0.40	0.11	0.30	0.11	0.11		0.43	0.11		0.11	0.12	
Increm. delay d2	28.2	0.1	4.5	0.1	0.1		14.1	0.0		0.1	0.2	
PF factor	0.850	0.850	0.417	0.850	0.850		0.788	0.455		0.788	0.455	
Control delay	68.7	34.5	15.4	34.6	34.4		48.9	9.1		28.0	10.9	
Lane group LOS	E	C	B	C	C		D	A		C	B	
Apprch. delay	30.9			34.5			32.7			11.5		
Approach LOS	C			C			C			B		
Intersec. delay	24.3			Intersection LOS						C		

10-A
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@RANCHO SANTA FE DR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	2	2	2	0	2	3	0	2	3	2
Lane group	L	T	R	L	TR		L	TR		L	T	R
Volume (vph)	667	302	319	61	467	105	838	963	20	200	573	255
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5		5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 32.0	G = 25.0	G =	G =	G = 12.0	G = 24.0	G = 22.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	702	318	336	64	603		882	1035		211	603	268
Lane group cap.	744	667	1346	744	646		954	1939		279	839	1102
v/c ratio	0.94	0.48	0.25	0.09	0.93		0.92	0.53		0.76	0.72	0.24
Green ratio	0.23	0.18	0.51	0.23	0.18		0.29	0.36		0.09	0.16	0.42
Unif. delay d1	53.1	51.6	19.5	42.5	56.7		48.0	35.1		62.6	56.1	26.1
Delay factor k	0.46	0.11	0.11	0.11	0.45		0.44	0.14		0.31	0.28	0.11
Increm. delay d2	20.4	0.5	0.1	0.1	20.7		14.3	0.3		11.3	3.0	0.1
PF factor	0.802	0.855	0.314	0.802	0.855		0.724	0.618		0.938	0.876	0.514
Control delay	63.1	44.7	6.2	34.1	69.2		49.1	22.0		69.9	52.1	13.5
Lane group LOS	E	D	A	C	E		D	C		E	D	B
Apprch. delay	44.7			65.8			34.5			46.0		
Approach LOS	D			E			C			D		
Intersec. delay	43.9			Intersection LOS						D		

10-P
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@RANCHO SANTA FE DR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	2	2	2	0	2	3	0	2	3	2
Lane group	L	T	R	L	TR		L	TR		L	T	R
Volume (vph)	320	375	514	15	290	135	158	914	11	150	839	694
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5		5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 34.0	G = 23.0	G =	G =	G = 11.0	G = 22.0	G = 25.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	337	395	541	16	447		166	974		158	883	731
Lane group cap.	791	613	1252	791	581		884	1980		256	953	1197
v/c ratio	0.43	0.64	0.43	0.02	0.77		0.19	0.49		0.62	0.93	0.61
Green ratio	0.24	0.16	0.47	0.24	0.16		0.27	0.37		0.08	0.18	0.46
Unif. delay d1	44.8	54.7	24.6	40.3	56.0		39.2	33.8		62.5	56.6	28.6
Delay factor k	0.11	0.22	0.11	0.11	0.32		0.11	0.11		0.20	0.44	0.20
Increm. delay d2	0.4	2.3	0.2	0.0	6.2		0.1	0.2		4.5	14.6	0.9
PF factor	0.786	0.869	0.405	0.786	0.869		0.752	0.606		0.943	0.855	0.439
Control delay	35.6	49.8	10.2	31.7	54.9		29.5	20.7		63.4	63.0	13.5
Lane group LOS	D	D	B	C	D		C	C		E	E	B
Apprch. delay	29.2			54.1			22.0			42.6		
Approach LOS	C			D			C			D		
Intersec. delay	35.0			Intersection LOS						D		

11-A

2010

NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SAN. FE@SAN ELIJO RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	2	1	1	1	3	1	2	3	1
Lane group	L	TR		L	T	R	L	T	R	L	T	R
Volume (vph)	80	33	108	576	54	327	54	1414	421	181	720	52
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		0	5	0	0	5	0	300	5	0	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 35.0	G = 30.0	G =	G =	G = 11.0	G = 44.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	84	149		606	57	344	57	1488	127	191	758	55
Lane group cap.	419	372		814	399	490	132	1679	896	256	1678	468
v/c ratio	0.20	0.40		0.74	0.14	0.70	0.43	0.89	0.14	0.75	0.45	0.12
Green ratio	0.25	0.21		0.25	0.21	0.33	0.08	0.31	0.60	0.08	0.31	0.31
Unif. delay d1	41.5	47.3		48.4	44.6	41.0	61.5	45.6	12.2	63.1	38.4	34.2
Delay factor k	0.11	0.11		0.30	0.11	0.27	0.11	0.41	0.11	0.30	0.11	0.11
Increm. delay d2	0.2	0.7		3.8	0.2	4.5	2.3	6.1	0.1	11.3	0.2	0.1
PF factor	0.778	0.818		0.778	0.818	0.674	0.943	0.694	0.125	0.943	0.694	0.694
Control delay	32.5	39.4		41.4	36.6	32.1	60.3	37.8	1.6	70.9	26.8	23.8
Lane group LOS	C	D		D	D	C	E	D	A	E	C	C
Apprch. delay	36.9			37.9			35.8			35.1		
Approach LOS	D			D			D			D		
Intersec. delay	36.2			Intersection LOS						D		

11-P
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SAN. FE@SAN ELIJO RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	2	1	1	1	3	1	2	3	1
Lane group	L	TR		L	T	R	L	T	R	L	T	R
Volume (vph)	122	64	29	661	27	187	62	775	454	179	1076	112
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		0	5	0	0	5	0	300	5	0	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 37.0	G = 25.0	G =	G =	G = 13.0	G = 45.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	128	98		696	28	197	65	816	162	188	1133	118
Lane group cap.	443	334		861	333	457	156	1717	928	302	1716	479
v/c ratio	0.29	0.29		0.81	0.08	0.43	0.42	0.48	0.17	0.62	0.66	0.25
Green ratio	0.26	0.18		0.26	0.18	0.31	0.09	0.32	0.62	0.09	0.32	0.32
Unif. delay d1	41.0	49.8		48.2	48.0	38.7	59.9	38.0	11.3	61.1	40.9	35.0
Delay factor k	0.11	0.11		0.35	0.11	0.11	0.11	0.11	0.11	0.21	0.23	0.11
Increm. delay d2	0.4	0.5		5.8	0.1	0.7	1.8	0.2	0.1	3.9	1.0	0.3
PF factor	0.761	0.855		0.761	0.855	0.704	0.932	0.684	0.132	0.932	0.684	0.684
Control delay	31.6	43.1		42.4	41.1	27.9	57.6	26.2	1.6	60.9	28.9	24.2
Lane group LOS	C	D		D	D	C	E	C	A	E	C	C
Apprch. delay	36.6			39.3			24.4			32.7		
Approach LOS	D			D			C			C		
Intersec. delay	32.2			Intersection LOS						C		

12-A

2010

NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SAN. FE@CAM. JUNIPERO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	1	1	3	1	1	3	1
Lane group	L	TR		L	T	R	L	T	R	L	T	R
Volume (vph)	128	5	55	43	5	70	15	1691	37	24	1334	46
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		0	5	0	0	5		0	5	0	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 17.0	G = 13.0	G =	G =	G = 12.0	G = 68.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	135	63		45	5	74	16	1780	39	25	1404	48
Lane group cap.	219	169		219	186	341	155	2794	1038	155	2793	781
v/c ratio	0.62	0.37		0.21	0.03	0.22	0.10	0.64	0.04	0.16	0.50	0.06
Green ratio	0.13	0.10		0.13	0.10	0.23	0.09	0.52	0.69	0.09	0.52	0.52
Unif. delay d1	53.4	54.7		50.5	52.8	40.5	54.1	22.2	6.3	54.4	20.1	15.3
Delay factor k	0.20	0.11		0.11	0.11	0.11	0.11	0.22	0.11	0.11	0.11	0.11
Increm. delay d2	5.2	1.4		0.5	0.1	0.3	0.3	0.5	0.0	0.5	0.1	0.0
PF factor	0.900	0.926		0.900	0.926	0.800	0.932	0.269	0.163	0.932	0.269	0.269
Control delay	53.2	52.0		45.9	48.9	32.7	50.7	6.4	1.0	51.2	5.5	4.1
Lane group LOS	D	D		D	D	C	D	A	A	D	A	A
Apprch. delay	52.8			38.1			6.7			6.3		
Approach LOS	D			D			A			A		
Intersec. delay	10.1			Intersection LOS						B		

12-P
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SAN. FE@CAM. JUNIPERO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	1	1	3	1	1	3	1
Lane group	L	TR		L	T	R	L	T	R	L	T	R
Volume (vph)	82	8	32	34	16	100	31	1109	123	106	1518	142
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		30	5	0	0	5		0	5	0	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 17.0	G = 13.0	G =	G =	G = 15.0	G = 65.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	86	10		36	17	105	33	1167	129	112	1598	149
Lane group cap.	219	190		219	186	375	193	2671	1004	193	2670	747
v/c ratio	0.39	0.05		0.16	0.09	0.28	0.17	0.44	0.13	0.58	0.60	0.20
Green ratio	0.13	0.10		0.13	0.10	0.25	0.12	0.50	0.67	0.12	0.50	0.50
Unif. delay d1	51.8	52.9		50.2	53.1	39.0	51.9	20.8	7.8	54.5	23.2	18.1
Delay factor k	0.11	0.11		0.11	0.11	0.11	0.11	0.11	0.11	0.17	0.19	0.11
Increm. delay d2	1.2	0.1		0.4	0.2	0.4	0.4	0.1	0.1	4.4	0.4	0.1
PF factor	0.900	0.926		0.900	0.926	0.773	0.913	0.333	0.151	0.913	0.333	0.333
Control delay	47.7	49.1		45.5	49.4	30.5	47.8	7.0	1.2	54.1	8.1	6.1
Lane group LOS	D	D		D	D	C	D	A	A	D	A	A
Apprch. delay	47.9			36.0			7.5			10.7		
Approach LOS	D			D			A			B		
Intersec. delay	11.7			Intersection LOS						B		

13-A
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*RANCHO SANTA FR DR./LA COSTA A*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*09/11/08*	Jurisdiction	*CARLSBAD*
Time Period	*2010 AM PEAK*	Analysis Year	*YEAR 2010 NO PROJECT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*1*	*2*	*0*	*1*	*2*	*0*	*2*	*3*	*0*	*2*	*3*	*0*
Lane group	*L*	*TR*		*L*	*TR*		*L*	*TR*		*L*	*TR*	
Volume (vph)	*302*	*184*	*156*	*35*	*252*	*59*	*82*	*1367*	*59*	*123*	*1179*	*213*
% Heavy veh	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Actuated (P/A)	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*
Startup lost time	*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	
Ext. eff. green	*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	
Arrival type	*5*	*5*		*5*	*5*		*5*	*5*		*5*	*5*	
Unit Extension	*3.0*	*3.0*		*3.0*	*3.0*		*3.0*	*3.0*		*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*5*	*0*	*0*	*5*	*0*	*40*	*5*	*0*	*45*	*5*	*0*	*100*
Lane Width	*12.0*	*12.0*		*12.0*	*12.0*		*12.0*	*12.0*		*12.0*	*12.0*	
Parking/Grade/Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking/hr												
Bus stops/hr	*0*	*0*		*0*	*0*		*0*	*0*		*0*	*0*	
Unit Extension	*3.0*	*3.0*		*3.0*	*3.0*		*3.0*	*3.0*		*3.0*	*3.0*	

Phasing	Excl. Left	EB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = *16.0*	G = *18.0*	G = *18.0*	G =	G = *11.0*	G = *42.0*	G =	G =
	Y = *5*	Y = *5*	Y = *5*	Y =	Y = *5*	Y = *5*	Y =	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *130.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	*318*	*358*		*37*	*285*		*86*	*1454*		*129*	*1360*	
Lane group cap.	*503*	*1091*		*206*	*510*		*276*	*1723*		*276*	*1702*	
v/c ratio	*0.63*	*0.33*		*0.18*	*0.56*		*0.31*	*0.84*		*0.47*	*0.80*	
Green ratio	*0.30*	*0.32*		*0.12*	*0.14*		*0.08*	*0.32*		*0.08*	*0.32*	
Unif. delay d1	*39.3*	*34.0*		*51.1*	*52.3*		*55.9*	*40.9*		*56.7*	*40.1*	
Delay factor k	*0.21*	*0.11*		*0.11*	*0.16*		*0.11*	*0.38*		*0.11*	*0.34*	
Increm. delay d2	*2.6*	*0.2*		*0.4*	*1.4*		*0.6*	*4.0*		*1.3*	*2.8*	
PF factor	*0.714*	*0.693*		*0.906*	*0.893*		*0.938*	*0.682*		*0.938*	*0.682*	
Control delay	*30.7*	*23.7*		*46.8*	*48.1*		*53.1*	*32.0*		*54.5*	*30.2*	
Lane group LOS	*C*	*C*		*D*	*D*		*D*	*C*		*D*	*C*	
Apprch. delay	*27.0*			*47.9*			*33.1*			*32.3*		
Approach LOS	*C*			*D*			*C*			*C*		
Intersec. delay	*33.0*			Intersection LOS						*C*		

13-P
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*RANCHO SANTA FR DR./LA COSTA A*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*09/11/08*	Jurisdiction	*CARLSBAD*
Time Period	*2010 PM PEAK*	Analysis Year	*YEAR 2010 NO PROJECT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*1*	*2*	*0*	*1*	*2*	*0*	*2*	*3*	*0*	*2*	*3*	*0*
Lane group	*L*	*TR*		*L*	*TR*		*L*	*TR*		*L*	*TR*	
Volume (vph)	*251*	*160*	*145*	*26*	*207*	*45*	*205*	*1151*	*35*	*142*	*1177*	*255*
% Heavy veh	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Actuated (P/A)	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*
Startup lost time	*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	
Ext. eff. green	*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	
Arrival type	*5*	*5*		*5*	*5*		*5*	*5*		*5*	*5*	
Unit Extension	*3.0*	*3.0*		*3.0*	*3.0*		*3.0*	*3.0*		*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*5*	*0*	*0*	*5*	*0*	*40*	*5*	*0*	*0*	*5*	*0*	*100*
Lane Width	*12.0*	*12.0*		*12.0*	*12.0*		*12.0*	*12.0*		*12.0*	*12.0*	
Parking/Grade/Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking/hr												
Bus stops/hr	*0*	*0*		*0*	*0*		*0*	*0*		*0*	*0*	
Unit Extension	*3.0*	*3.0*		*3.0*	*3.0*		*3.0*	*3.0*		*3.0*	*3.0*	

Phasing	Excl. Left	EB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = *24.0*	G = *5.0*	G = *21.0*	G =	G = *13.0*	G = *42.0*	G =	G =
	Y = *5*	Y = *5*	Y = *5*	Y =	Y = *5*	Y = *5*	Y =	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *130.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	*264*	*321*		*27*	*223*		*216*	*1249*		*149*	*1402*	
Lane group cap.	*438*	*811*		*309*	*600*		*326*	*1718*		*326*	*1694*	
v/c ratio	*0.60*	*0.40*		*0.09*	*0.37*		*0.66*	*0.73*		*0.46*	*0.83*	
Green ratio	*0.26*	*0.24*		*0.18*	*0.16*		*0.10*	*0.32*		*0.10*	*0.32*	
Unif. delay d1	*42.1*	*41.6*		*43.9*	*48.6*		*56.4*	*38.9*		*55.2*	*40.7*	
Delay factor k	*0.19*	*0.11*		*0.11*	*0.11*		*0.24*	*0.29*		*0.11*	*0.37*	
Increm. delay d2	*2.3*	*0.3*		*0.1*	*0.4*		*5.0*	*1.6*		*1.0*	*3.6*	
PF factor	*0.764*	*0.791*		*0.849*	*0.872*		*0.926*	*0.682*		*0.926*	*0.682*	
Control delay	*34.5*	*33.3*		*37.4*	*42.8*		*57.2*	*28.1*		*52.1*	*31.3*	
Lane group LOS	*C*	*C*		*D*	*D*		*E*	*C*		*D*	*C*	
Apprch. delay	*33.8*			*42.2*			*32.4*			*33.3*		
Approach LOS	*C*			*D*			*C*			*C*		
Intersec. delay	*33.6*			Intersection LOS						*C*		

14-A
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*RANCHO SANTA FR DR./CAM. DE LO*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*09/11/08*	Jurisdiction	*CARLSBAD*
Time Period	*2010 AM PEAK*	Analysis Year	*YEAR 2010 NO PROJECT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*0*	*0*	*0*	*2*	*0*	*1*	*0*	*3*	*0*	*1*	*3*	*0*
Lane group				*L*		*R*		*TR*		*L*	*T*	
Volume (vph)				*265*		*126*		*1382*	*190*	*95*	*1275*	
% Heavy veh				*2*		*2*		*2*	*2*	*2*	*2*	
PHF				*0.95*		*0.95*		*0.95*	*0.95*	*0.95*	*0.95*	
Actuated (P/A)				*A*		*A*		*A*	*A*	*A*	*A*	
Startup lost time				*2.0*		*2.0*		*2.0*		*2.0*	*2.0*	
Ext. eff. green				*2.0*		*2.0*		*2.0*		*2.0*	*2.0*	
Arrival type				*5*		*5*		*5*		*5*	*5*	
Unit Extension				*3.0*		*3.0*		*3.0*		*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*5*			*5*		*40*	*5*	*0*	*0*			
Lane Width				*12.0*		*12.0*		*12.0*		*12.0*	*12.0*	
Parking/Grade/Parking	*N*		*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking/hr												
Bus stops/hr				*0*		*0*		*0*		*0*	*0*	
Unit Extension				*3.0*		*3.0*		*3.0*		*3.0*	*3.0*	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = *25.0*	G =	G =	G =	G = *15.0*	G = *85.0*	G =	G =
	Y = *5*	Y =	Y =	Y =	Y = *5*	Y = *5*	Y =	Y =

Duration of Analysis (hrs) = *0.25* — Cycle Length C = *140.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				*279*		*91*		*1655*		*100*	*1342*	
Lane group cap.				*581*		*482*		*3183*		*180*	*4004*	
v/c ratio				*0.48*		*0.19*		*0.52*		*0.56*	*0.34*	
Green ratio				*0.18*		*0.32*		*0.61*		*0.11*	*0.75*	
Unif. delay d1				*51.7*		*34.3*		*15.8*		*59.3*	*5.8*	
Delay factor k				*0.11*		*0.11*		*0.13*		*0.15*	*0.11*	
Increm. delay d2				*0.6*		*0.2*		*0.2*		*3.8*	*0.0*	
PF factor				*0.855*		*0.684*		*0.127*		*0.920*	*0.200*	
Control delay				*44.8*		*23.7*		*2.2*		*58.4*	*1.2*	
Lane group LOS				*D*		*C*		*A*		*E*	*A*	
Apprch. delay				*39.6*			*2.2*			*5.2*		
Approach LOS				*D*			*A*			*A*		
Intersec. delay	*7.4*			Intersection LOS						*A*		

14-8

2010

NP

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*RANCHO SANTA FR DR./CAM. DE LO*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*09/11/08*	Jurisdiction	*CARLSBAD*
Time Period	*2010 PM PEAK*	Analysis Year	*YEAR 2010 NO PROJECT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*0*	*0*	*0*	*2*	*0*	*1*	*0*	*3*	*0*	*1*	*3*	*0*
Lane group				*L*		*R*		*TR*		*L*	*T*	
Volume (vph)				*130*		*130*		*1161*	*200*	*126*	*1222*	
% Heavy veh				*2*		*2*		*2*	*2*	*2*	*2*	
PHF				*0.95*		*0.95*		*0.95*	*0.95*	*0.95*	*0.95*	
Actuated (P/A)				*A*		*A*		*A*	*A*	*A*	*A*	
Startup lost time				*2.0*		*2.0*		*2.0*		*2.0*	*2.0*	
Ext. eff. green				*2.0*		*2.0*		*2.0*		*2.0*	*2.0*	
Arrival type				*5*		*5*		*5*		*5*	*5*	
Unit Extension				*3.0*		*3.0*		*3.0*		*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*5*			*5*		*40*	*5*	*0*	*0*			
Lane Width				*12.0*		*12.0*		*12.0*		*12.0*	*12.0*	
Parking/Grade/Parking	*N*		*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking/hr												
Bus stops/hr				*0*		*0*		*0*		*0*	*0*	
Unit Extension				*3.0*		*3.0*		*3.0*		*3.0*	*3.0*	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = *18.0*	G =	G =	G =	G = *23.0*	G = *74.0*	G =	G =
	Y = *5*	Y =	Y =	Y =	Y = *5*	Y = *5*	Y =	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *130.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				*137*		*95*		*1433*		*133*	*1286*	
Lane group cap.				*451*		*530*		*3240*		*297*	*4189*	
v/c ratio				*0.30*		*0.18*		*0.44*		*0.45*	*0.31*	
Green ratio				*0.14*		*0.35*		*0.57*		*0.18*	*0.78*	
Unif. delay d1				*50.4*		*29.0*		*16.1*		*47.8*	*4.0*	
Delay factor k				*0.11*		*0.11*		*0.11*		*0.11*	*0.11*	
Increm. delay d2				*0.4*		*0.2*		*0.1*		*1.1*	*0.0*	
PF factor				*0.893*		*0.635*		*0.119*		*0.857*	*0.232*	
Control delay				*45.4*		*18.6*		*2.0*		*42.0*	*1.0*	
Lane group LOS				*D*		*B*		*A*		*D*	*A*	
Apprch. delay				*34.4*			*2.0*			*4.8*		
Approach LOS				*C*			*A*			*A*		
Intersec. delay	*5.7*			Intersection LOS						*A*		

15-A 2010 NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./CALLE BARCELO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	2	0	1	3	0	1	3	0
Lane group	L	T	R	L	LTR		L	TR		L	TR	
Volume (vph)	91	120	70	295	135	110	55	1371	335	90	1387	64
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	EB Only	WB Only	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 16.0	G = 21.0	G =	G =	G = 12.0	G = 53.0	G =	G =
	Y = 4	Y = 4	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	96	126	74	233	336		58	1796		95	1527	
Lane group cap.	223	261	200	293	612		168	2290		168	2343	
v/c ratio	0.43	0.48	0.37	0.80	0.55		0.35	0.78		0.57	0.65	
Green ratio	0.13	0.13	0.13	0.17	0.17		0.10	0.44		0.10	0.44	
Unif. delay d1	47.8	48.2	47.4	47.4	45.2		50.3	28.6		51.5	26.3	
Delay factor k	0.11	0.11	0.11	0.34	0.15		0.11	0.33		0.16	0.23	
Increm. delay d2	1.3	1.4	1.2	14.1	1.1		1.2	1.9		4.4	0.7	
PF factor	0.897	0.897	0.897	0.859	0.859		0.926	0.473		0.926	0.473	
Control delay	44.2	44.6	43.7	54.8	39.8		47.8	15.4		52.1	13.1	
Lane group LOS	D	D	D	D	D		D	B		D	B	
Apprch. delay	44.3			46.0			16.4			15.4		
Approach LOS	D			D			B			B		
Intersec. delay	21.8			Intersection LOS						C		

15-P

2010

NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./CALLE BARCELO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	2	0	1	3	0	1	3	0
Lane group	L	T	R	L	LTR		L	TR		L	TR	
Volume (vph)	37	85	50	105	55	40	55	836	276	87	1253	12
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	EB Only	WB Only	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 16.0	G = 21.0	G =	G =	G = 12.0	G = 53.0	G =	G =
	Y = 4	Y = 4	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	39	89	53	83	128		58	1171		92	1332	
Lane group cap.	223	261	200	293	615		168	2271		168	2355	
v/c ratio	0.17	0.34	0.26	0.28	0.21		0.35	0.52		0.55	0.57	
Green ratio	0.13	0.13	0.13	0.17	0.17		0.10	0.44		0.10	0.44	
Unif. delay d1	46.1	47.2	46.7	43.0	42.4		50.3	24.2		51.4	24.9	
Delay factor k	0.11	0.11	0.11	0.11	0.11		0.11	0.12		0.15	0.16	
Increm. delay d2	0.4	0.8	0.7	0.5	0.2		1.2	0.2		3.7	0.3	
PF factor	0.897	0.897	0.897	0.859	0.859		0.926	0.473		0.926	0.473	
Control delay	41.8	43.2	42.6	37.4	36.6		47.8	11.7		51.4	12.1	
Lane group LOS	D	D	D	D	D		D	B		D	B	
Apprch. delay	42.7			36.9			13.4			14.6		
Approach LOS	D			D			B			B		
Intersec. delay	17.3			Intersection LOS						B		

16-A

2010

NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OLIVENHAIN RD./RANCHO SANTA FE
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	1	1	1	1	2	1	2	2	1
Lane group		LTR		L	LT	R	L	T	R	L	T	R
Volume (vph)	20	15	25	456	10	653	15	1088	225	275	1452	25
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type		5		5	5	5	5	5	5	5	5	5
Unit Extension		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	15	0	0	0	0	0	0
Lane Width		12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0		0	0	0	0	0	0	0	0	0
Unit Extension		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	EB Only	WB Only	03	04	Excl. Left	SB Only	Thru & RT	08
Timing	G = 11.0	G = 25.0	G =	G =	G = 6.0	G = 16.0	G = 48.0	G =
	Y = 4	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		63		230	261	672	16	1145	237	289	1528	26
Lane group cap.		154		322	360	658	77	1378	842	676	1981	981
v/c ratio		0.41		0.71	0.73	1.02	0.21	0.83	0.28	0.43	0.77	0.03
Green ratio		0.08		0.19	0.19	0.44	0.05	0.37	0.56	0.21	0.53	0.65
Unif. delay d1		56.4		49.2	49.3	36.5	59.7	37.3	14.8	44.8	24.2	7.9
Delay factor k		0.11		0.28	0.29	0.50	0.11	0.37	0.11	0.11	0.32	0.11
Increm. delay d2		1.8		7.3	7.1	40.6	1.3	4.5	0.2	0.4	1.9	0.0
PF factor		0.938		0.841	0.841	0.479	0.968	0.610	0.146	0.825	0.246	0.144
Control delay		54.7		48.7	48.6	58.1	59.1	27.2	2.4	37.4	7.9	1.2
Lane group LOS		D		D	D	E	E	C	A	D	A	A
Apprch. delay	54.7			54.1			23.4			12.4		
Approach LOS	D			D			C			B		
Intersec. delay	27.3			Intersection LOS						C		

16-P
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OLIVENHAIN RD./RANCHO SANTA FE
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	1	1	1	1	2	1	2	2	1
Lane group		LTR		L	LT	R	L	T	R	L	T	R
Volume (vph)	20	5	20	425	20	182	10	1252	450	525	853	30
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type		5		5	5	5	5	5	5	4	5	4
Unit Extension		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width		12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0		0	0	0	0	0	0	0	0	0
Unit Extension		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	EB Only	WB Only	03	04	Excl. Left	SB Only	Thru & RT	08
Timing	G = 11.0	G = 21.0	G =	G =	G = 6.0	G = 16.0	G = 52.0	G =
	Y = 4	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		47		224	244	192	11	1318	474	553	898	32
Lane group cap.		152		271	303	612	77	1493	842	676	2096	1027
v/c ratio		0.31		0.83	0.81	0.31	0.14	0.88	0.56	0.82	0.43	0.03
Green ratio		0.08		0.16	0.16	0.41	0.05	0.40	0.56	0.21	0.56	0.68
Unif. delay d1		55.9		52.7	52.5	26.1	59.5	36.2	18.3	49.2	16.5	6.6
Delay factor k		0.11		0.36	0.35	0.11	0.11	0.41	0.16	0.36	0.11	0.11
Increm. delay d2		1.2		18.6	14.7	0.3	0.9	6.6	0.9	7.8	0.1	0.0
PF factor		0.938		0.872	0.872	0.541	0.968	0.556	0.146	1.000	0.146	0.318
Control delay		53.6		64.6	60.4	14.4	58.5	26.7	3.5	57.0	2.5	2.1
Lane group LOS		D		E	E	B	E	C	A	E	A	A
Apprch. delay	53.6			48.5			20.8			22.8		
Approach LOS	D			D			C			C		
Intersec. delay	26.5			Intersection LOS						C		

17-A
2010
NP

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	USAI
Agency/Co.	USAI
Date Performed	09/11/08
Analysis Time Period	AM PEAK HOUR

Site Information

Intersection	RSF/EL CAMINO DEL NORTE
Jurisdiction	ENCINITAS
Analysis Year	YEAR 2010 NO PROJECT

Project ID *LA COSTA TOWN SQUARE*

East/West Street: *CAM DEL NORTE*

North/South Street: *RANCHO SANTA FE ROAD*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume	10	5	10	120	5	373
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume	5	408	85	234	570	5
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		L	TR	LT	R	L	TR
PHF	0.95		0.95	0.95	0.95	0.95	0.95	0.95
Flow Rate	25		126	397	434	89	246	605
% Heavy Vehicles	0		0	2	2	2	2	2
No. Lanes	1		2		2		2	
Geometry Group	4b		5		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

	Eastbound		Westbound		Northbound		Southbound	
Prop. Left-Turns	0.4		1.0	0.0	0.0	0.0	1.0	0.0
Prop. Right-Turns	0.4		0.0	1.0	0.0	1.0	0.0	0.0
Prop. Heavy Vehicle								
hLT-adj	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	9.12		9.12	9.12	9.12	9.12	9.12	9.12

Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
hd, initial value	3.20		3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.02		0.11	0.35	0.39	0.08	0.22	0.54
hd, final value	9.12		9.12	9.12	9.12	9.12	9.12	9.12
x, final value	0.06		0.29	0.80	0.94	0.17	0.55	1.26
Move-up time, m	2.3		2.3		2.3		2.3	
Service Time	6.8		6.8		6.8		6.8	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity	275		376	495	462	339	445	605
Delay	12.44		14.54	32.47	55.34	11.24	20.00	156.36
LOS	B		B	D	F	B	C	F
Approach: Delay	12.44		28.15		47.84		116.94	
LOS	B		D		E		F	
Intersection Delay	72.62							
Intersection LOS	F							

17-P
2010
NP

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	USAI
Agency/Co.	USAI
Date Performed	09/11/08
Analysis Time Period	PM PEAK HOUR

Site Information

Intersection	RSF/EL CAMINO DEL NORTE
Jurisdiction	ENCINITAS
Analysis Year	YEAR 2010 NO PROJECT

Project ID LA COSTA TOWN SQUARE

East/West Street: CAM DEL NORTE

North/South Street: RANCHO SANTA FE ROAD

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume	5	5	5	100	10	144
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume	15	466	135	162	415	10
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		L	TR	LT	R	L	TR
PHF	0.95		0.95	0.95	0.95	0.95	0.95	0.95
Flow Rate	15		105	161	505	142	170	446
% Heavy Vehicles	0		0	2	2	2	2	2
No. Lanes	1		2		2		2	
Geometry Group	4b		5		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.3		1.0	0.0	0.0	0.0	1.0	0.0
Prop. Right-Turns	0.3		0.0	0.9	0.0	1.0	0.0	0.0
Prop. Heavy Vehicle								
hLT-adj	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	8.04		8.04	8.04	8.04	8.04	8.04	8.04

Departure Headway and Service Time

hd, initial value	3.20		3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.01		0.09	0.14	0.45	0.13	0.15	0.40
hd, final value	8.04		8.04	8.04	8.04	8.04	8.04	8.04
x, final value	0.03		0.23	0.31	0.91	0.23	0.33	0.80
Move-up time, m	2.3		2.3		2.3		2.3	
Service Time	5.7		5.7		5.7		5.7	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity	265		355	411	554	392	420	553
Delay	11.02		13.21	12.69	43.93	10.13	13.06	30.00
LOS	B		B	B	E	B	B	D
Approach: Delay	11.02		12.89		36.51		25.33	
LOS	B		B		E		D	
Intersection Delay	27.73							
Intersection LOS	D							

18-A
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ ALGA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	0	2	3	0	2	3	0
Lane group	L	T	R	L	TR		L	T		L	TR	
Volume (vph)	85	178	254	390	249	280	285	1763		80	959	65
% Heavy veh	2	2	2	2	2	2	2	2		2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A		A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	0	100	10	0	130	10			10	0	60
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 22.0	G = 24.0	G =	G =	G = 18.0	G = 56.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	89	187	162	411	420		300	1856		84	1014	
Lane group cap.	512	640	495	512	600		419	2136		419	2135	
v/c ratio	0.17	0.29	0.33	0.80	0.70		0.72	0.87		0.20	0.47	
Green ratio	0.16	0.17	0.34	0.16	0.17		0.13	0.40		0.13	0.40	
Unif. delay d1	51.1	50.6	34.7	56.9	54.6		58.5	38.6		54.6	31.1	
Delay factor k	0.11	0.11	0.11	0.35	0.27		0.28	0.40		0.11	0.11	
Increm. delay d2	0.2	0.3	0.4	9.0	3.6		5.8	4.2		0.2	0.2	
PF factor	0.876	0.862	0.663	0.876	0.862		0.902	0.556		0.902	0.556	
Control delay	44.9	43.9	23.4	58.8	50.7		58.6	25.6		49.4	17.5	
Lane group LOS	D	D	C	E	D		E	C		D	B	
Apprch. delay	36.5			54.7			30.2			19.9		
Approach LOS	D			D			C			B		
Intersec. delay	32.8			Intersection LOS						C		

18-P
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ ALGA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/09	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	0	2	3	0	2	3	0
Lane group	L	T	R	L	TR		L	T		L	TR	
Volume (vph)	125	448	659	461	240	65	381	737		207	2136	130
% Heavy veh	2	2	2	2	2	2	2	2		2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A		A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	0	250	10	0	10	10			10		70
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 22.4	G = 18.0	G =	G =	G = 20.0	G = 59.6	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	132	472	431	485	311		401	776		218	2311	
Lane group cap.	521	480	450	521	465		465	2274		465	2264	
v/c ratio	0.25	0.98	0.96	0.93	0.67		0.86	0.34		0.47	1.02	
Green ratio	0.16	0.13	0.31	0.16	0.13		0.14	0.43		0.14	0.43	
Unif. delay d1	51.5	60.9	47.6	58.0	58.2		58.7	27.0		55.1	40.2	
Delay factor k	0.11	0.49	0.47	0.45	0.24		0.39	0.11		0.11	0.50	
Increm. delay d2	0.3	36.6	31.7	23.6	3.7		15.3	0.1		0.7	24.3	
PF factor	0.873	0.902	0.704	0.873	0.902		0.889	0.506		0.889	0.506	
Control delay	45.2	91.5	65.3	74.3	56.1		67.4	13.8		49.7	44.7	
Lane group LOS	D	F	E	E	E		E	B		D	D	
Apprch. delay	74.7			67.2			32.0			45.1		
Approach LOS	E			E			C			D		
Intersec. delay	51.0			Intersection LOS						D		

19-A
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*EL CAMINO REAL@ COSTA DEL MAR*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*09/11/08*	Jurisdiction	*CARLSBAD*
Time Period	*AM PEAK*	Analysis Year	*YEAR 2010 NO PROJECT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*0*	*0*	*0*	*2*	*0*	*1*	*0*	*3*	*0*	*1*	*3*	*0*
Lane group				*L*		*R*		*TR*		*L*	*T*	
Volume (vph)				*133*		*112*		*2481*	*218*	*57*	*1602*	
% Heavy veh				*2*		*2*		*2*	*2*	*2*	*2*	
PHF				*0.95*		*0.95*		*0.95*	*0.95*	*0.95*	*0.95*	
Actuated (P/A)				*A*		*A*		*A*	*A*	*A*	*A*	
Startup lost time				*2.0*		*2.0*		*2.0*		*2.0*	*2.0*	
Ext. eff. green				*2.0*		*2.0*		*2.0*		*2.0*	*2.0*	
Arrival type				*5*		*5*		*5*		*5*	*5*	
Unit Extension				*3.0*		*3.0*		*3.0*		*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*10*			*10*		*60*	*10*	*0*	*0*			
Lane Width				*12.0*		*12.0*		*12.0*		*12.0*	*12.0*	
Parking/Grade/Parking	*N*		*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking/hr												
Bus stops/hr				*0*		*0*		*0*		*0*	*0*	
Unit Extension				*3.0*		*3.0*		*3.0*		*3.0*	*3.0*	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = *15.0*	G =	G =	G =	G = *20.0*	G = *70.0*	G =	G =
	Y = *5*	Y =	Y =	Y =	Y = *5*	Y = *5*	Y =	Y =

Duration of Analysis (hrs) = *0.25* | Cycle Length C = *120.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				*140*		*55*		*2841*		*60*	*1686*	
Lane group cap.				*407*		*188*		*3076*		*279*	*4228*	
v/c ratio				*0.34*		*0.29*		*0.92*		*0.22*	*0.40*	
Green ratio				*0.13*		*0.13*		*0.58*		*0.17*	*0.79*	
Unif. delay d1				*48.0*		*47.7*		*22.6*		*43.2*	*3.8*	
Delay factor k				*0.11*		*0.11*		*0.44*		*0.11*	*0.11*	
Increm. delay d2				*0.5*		*0.9*		*5.4*		*0.4*	*0.1*	
PF factor				*0.905*		*0.905*		*0.120*		*0.867*	*0.240*	
Control delay				*43.9*		*44.0*		*8.1*		*37.8*	*1.0*	
Lane group LOS				*D*		*D*		*A*		*D*	*A*	
Apprch. delay				*44.0*			*8.1*			*2.2*		
Approach LOS				*D*			*A*			*A*		
Intersec. delay	*7.4*			Intersection LOS			*A*					

19-P
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ COSTA DEL MAR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	1	0	3	0	1	3	0
Lane group				L		R		TR		L	T	
Volume (vph)				195		130		1446	50	179	3105	
% Heavy veh				2		2		2	2	2	2	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				5		5		5		5	5	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10			10		60	10	0	0			
Lane Width				12.0		12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 15.0	G =	G =	G =	G = 20.0	G = 70.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				205		74		1575		188	3268	
Lane group cap.				407		188		3099		279	4228	
v/c ratio				0.50		0.39		0.51		0.67	0.77	
Green ratio				0.13		0.13		0.58		0.17	0.79	
Unif. delay d1				49.0		48.3		14.8		46.9	6.7	
Delay factor k				0.11		0.11		0.12		0.25	0.32	
Increm. delay d2				1.0		1.4		0.1		6.3	0.9	
PF factor				0.905		0.905		0.120		0.867	0.240	
Control delay				45.4		45.1		1.9		47.0	2.5	
Lane group LOS				D		D		A		D	A	
Apprch. delay				45.3			1.9			5.0		
Approach LOS				D			A			A		
Intersec. delay	6.2			Intersection LOS						A		

20-A
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*I-5 SB OFF RAMP/LA COSTA AVE.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*09/11/08*	Jurisdiction	*CARLSBAD*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2010 NO PROJECT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*0*	*2*	*0*	*2*	*2*	*0*	*0*	*0*	*0*	*1*	*1*	*1*
Lane group		*TR*		*L*	*T*					*L*	*LT*	*R*
Volume (vph)		*470*	*85*	*494*	*340*					*561*	*10*	*392*
% Heavy veh		*2*	*2*	*2*	*2*					*2*	*2*	*2*
PHF		*0.95*	*0.95*	*0.95*	*0.95*					*0.95*	*0.95*	*0.95*
Actuated (P/A)		*A*	*A*	*A*	*A*					*A*	*A*	*A*
Startup lost time		*2.0*		*2.0*	*2.0*					*2.0*	*2.0*	*2.0*
Ext. eff. green		*2.0*		*2.0*	*2.0*					*2.0*	*2.0*	*2.0*
Arrival type		*5*		*5*	*5*					*5*	*5*	*5*
Unit Extension		*3.0*		*3.0*	*3.0*					*3.0*	*3.0*	*3.0*
Ped/Bike/RTOR Volume	*0*		*0*				*0*			*0*		*0*
Lane Width		*12.0*		*12.0*	*12.0*					*12.0*	*12.0*	*12.0*
Parking/Grade/Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*		*N*	*N*	*0*	*N*
Parking/hr												
Bus stops/hr		*0*		*0*	*0*					*0*	*0*	*0*
Unit Extension		*3.0*		*3.0*	*3.0*					*3.0*	*3.0*	*3.0*

Phasing	Thru & RT	WB Only	03	04	SB Only	06	07	08
Timing	G = *30.0*	G = *40.0*	G =	G =	G = *35.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y =	Y =	Y = *5*	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* | Cycle Length C = *120.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		*584*		*520*	*358*					*449*	*153*	*413*
Lane group cap.		*912*		*1085*	*2333*					*489*	*492*	*437*
v/c ratio		*0.64*		*0.48*	*0.15*					*0.92*	*0.31*	*0.95*
Green ratio		*0.25*		*0.33*	*0.63*					*0.29*	*0.29*	*0.29*
Unif. delay d1		*40.2*		*31.7*	*9.3*					*41.1*	*33.1*	*41.6*
Delay factor k		*0.22*		*0.11*	*0.11*					*0.44*	*0.11*	*0.46*
Increm. delay d2		*1.5*		*0.3*	*0.0*					*22.4*	*0.4*	*29.5*
PF factor		*0.778*		*0.667*	*0.133*					*0.725*	*0.725*	*0.725*
Control delay		*32.8*		*21.5*	*1.3*					*52.2*	*24.4*	*59.7*
Lane group LOS		*C*		*C*	*A*					*D*	*C*	*E*
Apprch. delay	*32.8*			*13.2*						*51.1*		
Approach LOS	*C*			*B*						*D*		
Intersec. delay	*33.4*			Intersection LOS						*C*		

20-P
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*I-5 SB OFF RAMP/LA COSTA AVE.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*09/11/08*	Jurisdiction	*CARLSBAD*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2010 NO PROJECT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*0*	*2*	*0*	*2*	*2*	*0*	*0*	*0*	*0*	*1*	*1*	*1*
Lane group		*TR*		*L*	*T*					*L*	*LT*	*R*
Volume (vph)		*630*	*70*	*440*	*651*					*324*	*15*	*228*
% Heavy veh		*2*	*2*	*2*	*2*					*2*	*2*	*2*
PHF		*0.95*	*0.95*	*0.95*	*0.95*					*0.95*	*0.95*	*0.95*
Actuated (P/A)		*A*	*A*	*A*	*A*					*A*	*A*	*A*
Startup lost time		*2.0*		*2.0*	*2.0*					*2.0*	*2.0*	*2.0*
Ext. eff. green		*2.0*		*2.0*	*2.0*					*2.0*	*2.0*	*2.0*
Arrival type		*5*		*5*	*5*					*5*	*5*	*5*
Unit Extension		*3.0*		*3.0*	*3.0*					*3.0*	*3.0*	*3.0*
Ped/Bike/RTOR Volume	*0*		*0*				*0*			*0*		*0*
Lane Width		*12.0*		*12.0*	*12.0*					*12.0*	*12.0*	*12.0*
Parking/Grade/Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*		*N*	*N*	*0*	*N*
Parking/hr												
Bus stops/hr		*0*		*0*	*0*					*0*	*0*	*0*
Unit Extension		*3.0*		*3.0*	*3.0*					*3.0*	*3.0*	*3.0*

Phasing	Thru & RT	WB Only	03	04	SB Only	06	07	08
Timing	G = *30.0*	G = *40.0*	G =	G =	G = *35.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y =	Y =	Y = *5*	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* | Cycle Length C = *120.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		*737*		*463*	*685*					*259*	*98*	*240*
Lane group cap.		*919*		*1085*	*2333*					*489*	*494*	*437*
v/c ratio		*0.80*		*0.43*	*0.29*					*0.53*	*0.20*	*0.55*
Green ratio		*0.25*		*0.33*	*0.63*					*0.29*	*0.29*	*0.29*
Unif. delay d1		*42.2*		*31.1*	*10.3*					*35.6*	*32.0*	*35.8*
Delay factor k		*0.35*		*0.11*	*0.11*					*0.13*	*0.11*	*0.15*
Increm. delay d2		*5.2*		*0.3*	*0.1*					*1.1*	*0.2*	*1.5*
PF factor		*0.778*		*0.667*	*0.133*					*0.725*	*0.725*	*0.725*
Control delay		*38.0*		*21.0*	*1.4*					*26.9*	*23.4*	*27.5*
Lane group LOS		*D*		*C*	*A*					*C*	*C*	*C*
Apprch. delay	*38.0*			*9.3*						*26.6*		
Approach LOS	*D*			*A*						*C*		
Intersec. delay	*22.0*			Intersection LOS						*C*		

21-A
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 NB OFF RAMP/LA COSTA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	3	1	0	1	2	0	0	0
Lane group	L	T			T	R		LT	R			
Volume (vph)	185	846			774	516	60	7	477			
% Heavy veh	0	2			2	2	2	2	2			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0	2.0		2.0	2.0			
Ext. eff. green	2.0	2.0			2.0	2.0		2.0	2.0			
Arrival type	5	5			5	5		5	5			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			
Ped/Bike/RTOR Volume				0	0	100	0		0	0		
Lane Width	12.0	12.0			12.0	12.0		12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0	0		0	0			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 25.0	G = 40.0	G =	G =	G = 40.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	195	891			815	438		70	502			
Lane group cap.	356	2178			1780	1062		563	885			
v/c ratio	0.55	0.41			0.46	0.41		0.12	0.57			
Green ratio	0.21	0.58			0.33	0.71		0.33	0.33			
Unif. delay d1	42.4	13.7			31.5	7.2		27.8	32.9			
Delay factor k	0.15	0.11			0.11	0.11		0.11	0.16			
Increm. delay d2	1.8	0.1			0.2	0.3		0.1	0.9			
PF factor	0.825	0.120			0.667	0.171		0.667	0.667			
Control delay	36.8	1.8			21.2	1.5		18.6	22.8			
Lane group LOS	D	A			C	A		B	C			
Apprch. delay	8.1			14.3			22.3					
Approach LOS	A			B			C					
Intersec. delay	13.5			Intersection LOS						B		

21-8
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 NB OFF RAMP/LA COSTA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	3	1	0	1	2	0	0	0
Lane group	L	T			T	R		LT	R			
Volume (vph)	120	834			886	257	205	5	663			
% Heavy veh	0	2			2	2	2	2	2			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0	2.0		2.0	2.0			
Ext. eff. green	2.0	2.0			2.0	2.0		2.0	2.0			
Arrival type	5	5			5	5		5	5			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			
Ped/Bike/RTOR Volume				0	0	100	0		0	0		
Lane Width	12.0	12.0			12.0	12.0		12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0	0		0	0			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 30.0	G = 35.0	G =	G =	G = 40.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB				WB			NB			SB		
Adj. flow rate	126	878			933	165		221	698				
Lane group cap.	428	2178			1558	1000		561	885				
v/c ratio	0.29	0.40			0.60	0.17		0.39	0.79				
Green ratio	0.25	0.58			0.29	0.67		0.33	0.33				
Unif. delay d1	36.4	13.6			36.5	7.5		30.7	36.2				
Delay factor k	0.11	0.11			0.19	0.11		0.11	0.34				
Increm. delay d2	0.4	0.1			0.6	0.1		0.5	4.8				
PF factor	0.778	0.120			0.725	0.150		0.667	0.667				
Control delay	28.7	1.8			27.1	1.2		20.9	29.0				
Lane group LOS	C	A			C	A		C	C				
Apprch. delay	5.1			23.2			27.0						
Approach LOS	A			C			C						
Intersec. delay	18.4			Intersection LOS						B			

22-A 2010 NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./PIRAEUS ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	1	4	0	1	0	1	0	0	0
Lane group		TR		L	T		L		R			
Volume (vph)		1123	200	75	1180		110		65			
% Heavy veh		2	0	0	2		2		2			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Actuated (P/A)		A	A	A	A		A	A	A			
Startup lost time		2.0		2.0	2.0		2.0		2.0			
Ext. eff. green		2.0		2.0	2.0		2.0		2.0			
Arrival type		5		5	5		5		5			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0		0				0		0	0		
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0		0	0		0		0			
Unit Extension		3.0		3.0	3.0		3.0		3.0			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 55.0	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1393		79	1242		116		68			
Lane group cap.		2236		190	5539		186		167			
v/c ratio		0.62		0.42	0.22		0.62		0.41			
Green ratio		0.61		0.11	0.78		0.11		0.11			
Unif. delay d1		11.0		37.3	2.7		38.2		37.2			
Delay factor k		0.21		0.11	0.11		0.21		0.11			
Increm. delay d2		0.5		1.5	0.0		6.4		1.6			
PF factor		0.129		0.917	0.225		0.917		0.917			
Control delay		2.0		35.6	0.6		41.4		35.8			
Lane group LOS		A		D	A		D		D			
Apprch. delay	2.0			2.7			39.3					
Approach LOS	A			A			D					
Intersec. delay	4.7			Intersection LOS						A		

22-8
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*LA COSTA AVE./PIRAEUS ST.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*09/11/08*	Jurisdiction	*CARLSBAD*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2010 NO PROJECT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*0*	*2*	*0*	*1*	*4*	*0*	*1*	*0*	*1*	*0*	*0*	*0*
Lane group		*TR*		*L*	*T*		*L*		*R*			
Volume (vph)		*1442*	*55*	*80*	*1038*		*105*		*36*			
% Heavy veh		*2*	*0*	*0*	*2*		*2*		*2*			
PHF		*0.95*	*0.95*	*0.95*	*0.95*		*0.95*		*0.95*			
Actuated (P/A)		*A*	*A*	*A*	*A*		*A*	*A*	*A*			
Startup lost time		*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			
Ext. eff. green		*2.0*		*2.0*	*2.0*		*2.0*		*2.0*			
Arrival type		*5*		*5*	*5*		*5*		*5*			
Unit Extension		*3.0*		*3.0*	*3.0*		*3.0*		*3.0*			
Ped/Bike/RTOR Volume	*0*		*0*				*0*		*0*	*0*		
Lane Width		*12.0*		*12.0*	*12.0*		*12.0*		*12.0*			
Parking/Grade/Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*		*N*
Parking/hr												
Bus stops/hr		*0*		*0*	*0*		*0*		*0*			
Unit Extension		*3.0*		*3.0*	*3.0*		*3.0*		*3.0*			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = *10.0*	G = *55.0*	G =	G =	G = *10.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y =	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *90.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		*1576*		*84*	*1093*		*111*		*38*			
Lane group cap.		*2270*		*190*	*5539*		*186*		*167*			
v/c ratio		*0.69*		*0.44*	*0.20*		*0.60*		*0.23*			
Green ratio		*0.61*		*0.11*	*0.78*		*0.11*		*0.11*			
Unif. delay d1		*11.8*		*37.4*	*2.6*		*38.1*		*36.5*			
Delay factor k		*0.26*		*0.11*	*0.11*		*0.19*		*0.11*			
Increm. delay d2		*0.9*		*1.6*	*0.0*		*5.2*		*0.7*			
PF factor		*0.129*		*0.917*	*0.225*		*0.917*		*0.917*			
Control delay		*2.5*		*35.9*	*0.6*		*40.1*		*34.1*			
Lane group LOS		*A*		*D*	*A*		*D*		*C*			
Apprch. delay	*2.5*			*3.1*			*38.6*					
Approach LOS	*A*			*A*			*D*					
Intersec. delay	*4.6*			Intersection LOS					*A*			

23-A

2010

NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./SAXONY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	1	2	0	1	0	1	0	0	0
Lane group		TR		L	T		L		R			
Volume (vph)		1112	76	106	1207		48		52			
% Heavy veh		2	0	0	2		2		2			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Actuated (P/A)		A	A	A	A		A	A	A			
Startup lost time		2.0		2.0	2.0		2.0		2.0			
Ext. eff. green		2.0		2.0	2.0		2.0		2.0			
Arrival type		5		5	5		3		3			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0		0				0		0	0		
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0		0	0		0		0			
Unit Extension		3.0		3.0	3.0		3.0		3.0			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 55.0	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1251		112	1271		51		55			
Lane group cap.		2262		190	2903		186		167			
v/c ratio		0.55		0.59	0.44		0.27		0.33			
Green ratio		0.61		0.11	0.78		0.11		0.11			
Unif. delay d1		10.3		38.0	3.4		36.7		36.9			
Delay factor k		0.15		0.18	0.11		0.11		0.11			
Increm. delay d2		0.3		4.8	0.1		0.8		1.2			
PF factor		0.129		0.917	0.225		1.000		1.000			
Control delay		1.6		39.6	0.9		37.5		38.1			
Lane group LOS		A		D	A		D		D			
Apprch. delay	1.6			4.0			37.8					
Approach LOS	A			A			D					
Intersec. delay	4.2			Intersection LOS						A		

23-P
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./SAXONY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	1	2	0	1	0	1	0	0	0
Lane group		TR		L	T		L		R			
Volume (vph)		1394	64	77	1072		46		98			
% Heavy veh		2	0	0	2		2		2			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Actuated (P/A)		A	A	A	A		A	A	A			
Startup lost time		2.0		2.0	2.0		2.0		2.0			
Ext. eff. green		2.0		2.0	2.0		2.0		2.0			
Arrival type		5		5	5		3		3			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0		0				0		0	0		
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0		0	0		0		0			
Unit Extension		3.0		3.0	3.0		3.0		3.0			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 55.0	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1534		81	1128		48		103			
Lane group cap.		2268		190	2903		186		167			
v/c ratio		0.68		0.43	0.39		0.26		0.62			
Green ratio		0.61		0.11	0.78		0.11		0.11			
Unif. delay d1		11.6		37.3	3.2		36.6		38.2			
Delay factor k		0.25		0.11	0.11		0.11		0.20			
Increm. delay d2		0.8		1.5	0.1		0.7		6.7			
PF factor		0.129		0.917	0.225		1.000		1.000			
Control delay		2.3		35.8	0.8		37.3		44.9			
Lane group LOS		A		D	A		D		D			
Apprch. delay	2.3			3.1			42.5					
Approach LOS	A			A			D					
Intersec. delay	4.8			Intersection LOS						A		

24-A

2010

NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ LA COSTA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	1	2	1	2	3	0	2	3	1
Lane group	L	T	R	L	T	R	L	TR		L	T	R
Volume (vph)	492	297	375	169	503	136	250	2071	50	67	1108	560
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	0	150	10	0	50	10	0	30	10	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 22.0	G = 24.0	G =	G =	G = 14.0	G = 50.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	518	313	237	178	529	91	263	2201		71	1166	589
Lane group cap.	551	689	488	284	689	488	351	2051		351	2054	881
v/c ratio	0.94	0.45	0.49	0.63	0.77	0.19	0.75	1.07		0.20	0.57	0.67
Green ratio	0.17	0.18	0.33	0.17	0.18	0.33	0.11	0.38		0.11	0.38	0.59
Unif. delay d1	53.3	47.2	34.7	50.2	50.4	31.0	56.3	40.0		52.9	31.5	17.9
Delay factor k	0.45	0.11	0.11	0.21	0.32	0.11	0.30	0.50		0.11	0.16	0.24
Increm. delay d2	24.4	0.5	0.8	4.3	5.2	0.2	8.7	42.8		0.3	0.4	2.0
PF factor	0.864	0.849	0.670	0.864	0.849	0.670	0.920	0.583		0.920	0.583	0.123
Control delay	70.5	40.5	24.0	47.7	48.0	21.0	60.4	66.1		48.9	18.7	4.2
Lane group LOS	E	D	C	D	D	C	E	E		D	B	A
Apprch. delay	51.4			44.9			65.5			15.2		
Approach LOS	D			D			E			B		
Intersec. delay	45.5			Intersection LOS						D		

24-8
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ LA COSTA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	1	2	1	2	3	0	2	3	1
Lane group	L	T	R	L	T	R	L	TR		L	T	R
Volume (vph)	625	512	355	125	280	20	265	1026	110	236	2445	604
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	0	0	10		0	10	0	60	10	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	EB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 13.0	G = 9.0	G = 15.0	G =	G = 14.5	G = 58.0	G =	G =
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 134.5		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	658	539	374	132	295	21	279	1133		248	2574	636
Lane group cap.	654	805	517	162	416	385	351	2286		351	2303	997
v/c ratio	1.01	0.67	0.72	0.81	0.71	0.05	0.79	0.50		0.71	1.12	0.64
Green ratio	0.20	0.22	0.36	0.10	0.11	0.26	0.11	0.43		0.11	0.43	0.67
Unif. delay d1	53.8	48.4	37.2	59.6	57.6	37.7	58.5	27.7		57.9	38.3	12.8
Delay factor k	0.50	0.24	0.28	0.36	0.27	0.11	0.34	0.11		0.27	0.50	0.22
Increm. delay d2	36.7	2.2	5.0	26.4	5.5	0.1	12.0	0.2		4.5	57.7	1.0
PF factor	0.833	0.817	0.624	0.929	0.916	0.770	0.919	0.495		0.919	0.495	0.151
Control delay	81.5	41.7	28.2	81.7	58.4	29.1	65.8	13.9		57.8	76.6	2.9
Lane group LOS	F	D	C	F	E	C	E	B		E	E	A
Apprch. delay	55.1			63.9			24.1			61.7		
Approach LOS	E			E			C			E		
Intersec. delay	52.6			Intersection LOS						D		

25-A

2010

NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./VIEJO CASTILLA W
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	2	0	0	0	0	1	0	1
Lane group	L	T			TR					L		R
Volume (vph)	28	526			690	10				37		115
% Heavy veh	0	2			2	2				0		0
PHF	0.95	0.95			0.95	0.95				0.95		0.95
Actuated (P/A)	A	A			A	A				A		A
Startup lost time	2.0	2.0			2.0					2.0		2.0
Ext. eff. green	2.0	2.0			2.0					2.0		2.0
Arrival type	5	5			5					4		4
Unit Extension	3.0	3.0			3.0					3.0		3.0
Ped/Bike/RTOR Volume				0	0	0	0			0	0	0
Lane Width	12.0	12.0			12.0					12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0					0		0
Unit Extension	3.0	3.0			3.0					3.0		3.0

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 11.0	G = 40.0	G =	G =	G = 9.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 75.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	29	554			737					39		121
Lane group cap.	251	2787			1987					205		184
v/c ratio	0.12	0.20			0.37					0.19		0.66
Green ratio	0.15	0.75			0.53					0.12		0.12
Unif. delay d1	27.8	2.8			10.2					29.7		31.5
Delay factor k	0.11	0.11			0.11					0.11		0.23
Increm. delay d2	0.2	0.0			0.1					0.5		8.3
PF factor	0.885	0.197			0.238					1.000		1.000
Control delay	24.8	0.6			2.5					30.2		39.8
Lane group LOS	C	A			A					C		D
Apprch. delay	1.8			2.5						37.5		
Approach LOS	A			A						D		
Intersec. delay	6.0			Intersection LOS						A		

25-P
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./VIEJO CASTILLA W
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	2	0	0	0	0	1	0	1
Lane group	L	T			TR					L		R
Volume (vph)	215	762			734	25				15		55
% Heavy veh	0	2			2	2				0		0
PHF	0.95	0.95			0.95	0.95				0.95		0.95
Actuated (P/A)	A	A			A	A				A		A
Startup lost time	2.0	2.0			2.0					2.0		2.0
Ext. eff. green	2.0	2.0			2.0					2.0		2.0
Arrival type	5	5			5					5		5
Unit Extension	3.0	3.0			3.0					3.0		3.0
Ped/Bike/RTOR Volume				0	0	0	0			0	0	0
Lane Width	12.0	12.0			12.0					12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0					0		0
Unit Extension	3.0	3.0			3.0					3.0		3.0

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 18.0	G = 43.0	G =	G =	G = 14.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	226	802			799					16		58
Lane group cap.	342	2738			1792					266		238
v/c ratio	0.66	0.29			0.45					0.06		0.24
Green ratio	0.20	0.73			0.48					0.16		0.16
Unif. delay d1	33.2	4.1			15.6					32.4		33.4
Delay factor k	0.24	0.11			0.11					0.11		0.11
Increm. delay d2	1.9	0.0			0.1					0.1		0.5
PF factor	0.833	0.188			0.390					0.877		0.877
Control delay	29.6	0.8			6.2					28.5		29.8
Lane group LOS	C	A			A					C		C
Apprch. delay	7.1			6.2						29.5		
Approach LOS	A			A						C		
Intersec. delay	7.6			Intersection LOS						A		

26-A 2010 NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./ROMERIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	2	0	0	1	0	0	1	0
Lane group	L	T	R	L	TR			LTR			LTR	
Volume (vph)	15	491	35	30	585	28	105	10	8	88	5	10
% Heavy veh	0	2	0	0	2	2	2	2	2	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0			2.0			2.0	
Arrival type	5	5	5	5	5			5			5	
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0			0			0	
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 10.0	G = 39.0	G =	G =	G = 26.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	16	517	37	32	645			130			109	
Lane group cap.	190	850	663	190	1607			347			350	
v/c ratio	0.08	0.61	0.06	0.17	0.40			0.37			0.31	
Green ratio	0.11	0.43	0.43	0.11	0.43			0.29			0.29	
Unif. delay d1	35.9	19.6	14.8	36.2	17.5			25.5			25.0	
Delay factor k	0.11	0.19	0.11	0.11	0.11			0.11			0.11	
Increm. delay d2	0.2	1.3	0.0	0.4	0.2			0.7			0.5	
PF factor	0.917	0.490	0.490	0.917	0.490			0.729			0.729	
Control delay	33.1	10.9	7.3	33.6	8.7			19.3			18.7	
Lane group LOS	C	B	A	C	A			B			B	
Apprch. delay	11.3			9.9			19.3			18.7		
Approach LOS	B			A			B			B		
Intersec. delay	11.9			Intersection LOS						B		

26-8
2010
NB

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./ROMERIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	2	0	0	1	0	0	1	0
Lane group	L	T	R	L	TR			LTR			LTR	
Volume (vph)	10	722	45	20	714	105	35	5	6	8	5	10
% Heavy veh	0	2	0	0	2	2	2	2	2	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0			2.0			2.0	
Arrival type	5	5	5	5	5			5			5	
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0			0			0	
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 8.0	G = 47.0	G =	G =	G = 20.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	11	760	47	21	863			48			24	
Lane group cap.	152	1024	799	152	1912			310			350	
v/c ratio	0.07	0.74	0.06	0.14	0.45			0.15			0.07	
Green ratio	0.09	0.52	0.52	0.09	0.52			0.22			0.22	
Unif. delay d1	37.6	16.8	10.6	37.8	13.4			28.2			27.6	
Delay factor k	0.11	0.30	0.11	0.11	0.11			0.11			0.11	
Increm. delay d2	0.2	3.0	0.0	0.4	0.2			0.2			0.1	
PF factor	0.935	0.271	0.271	0.935	0.271			0.810			0.810	
Control delay	35.4	7.5	2.9	35.8	3.8			23.1			22.5	
Lane group LOS	D	A	A	D	A			C			C	
Apprch. delay	7.6			4.6			23.1			22.5		
Approach LOS	A			A			C			C		
Intersec. delay	6.7			Intersection LOS						A		

27-A 2010 NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./CADENCIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	2	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Volume (vph)	20	562	5	15	542	20	5	10	32	62	20	60
% Heavy veh	0	2	0	0	2	2	2	2	2	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0		2.0	2.0			2.0			2.0	
Arrival type	5	5		5	5			5			5	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0			0	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 5.0	G = 45.0	G =	G =	G = 25.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 90.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	21	597		16	592			50			149	
Lane group cap.	95	980		95	1857			435			403	
v/c ratio	0.22	0.61		0.17	0.32			0.11			0.37	
Green ratio	0.06	0.50		0.06	0.50			0.28			0.28	
Unif. delay d1	40.6	16.2		40.5	13.4			24.2			26.2	
Delay factor k	0.11	0.20		0.11	0.11			0.11			0.11	
Increm. delay d2	1.2	1.1		0.8	0.1			0.1			0.6	
PF factor	0.961	0.333		0.961	0.333			0.744			0.744	
Control delay	40.2	6.5		39.8	4.6			18.1			20.0	
Lane group LOS	D	A		D	A			B			C	
Apprch. delay	7.6			5.5			18.1			20.0		
Approach LOS	A			A			B			C		
Intersec. delay	8.4			Intersection LOS						A		

27-8
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./CADENCIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	2	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Volume (vph)	148	573	15	1	663	31	10	10	9	53	5	25
% Heavy veh	0	2	0	0	2	2	2	2	2	0	0	0
PHF	0.99	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0		2.0	2.0			2.0			2.0	
Arrival type	5	5		5	5			5			5	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0			0	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 10.0	G = 40.0	G =	G =	G = 25.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 90.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	149	619		1	731			31			87	
Lane group cap.	190	868		190	1648			434			392	
v/c ratio	0.78	0.71		0.01	0.44			0.07			0.22	
Green ratio	0.11	0.44		0.11	0.44			0.28			0.28	
Unif. delay d1	38.9	20.3		35.6	17.3			23.9			25.0	
Delay factor k	0.33	0.28		0.11	0.11			0.11			0.11	
Increm. delay d2	19.1	2.8		0.0	0.2			0.1			0.3	
PF factor	0.917	0.467		0.917	0.467			0.744			0.744	
Control delay	54.8	12.3		32.6	8.3			17.9			18.9	
Lane group LOS	D	B		C	A			B			B	
Apprch. delay	20.5			8.3			17.9			18.9		
Approach LOS	C			A			B			B		
Intersec. delay	14.9			Intersection LOS						B		

28-A
2010
NR

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 SB OFF RAMP/LEUCADIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	1	2	2	0	0	0	0	1	1	1
Lane group		T	R	L	T					L	LT	R
Volume (vph)		1293	228	374	417					406	1	52
% Heavy veh		2	0	0	2					0	0	0
PHF		0.95	0.95	0.95	0.95					0.95	0.95	0.95
Actuated (P/A)		A	A	A	A					A	A	A
Startup lost time		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Ext. eff. green		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Arrival type		5	5	5	5					5	5	5
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0				0			0		0
Lane Width		12.0	12.0	12.0	12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0	0	0	0					0	0	0
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0

Phasing	Thru & RT	WB Only	03	04	SB Only	06	07	08
Timing	G = 50.0	G = 25.0	G =	G =	G = 30.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1361	240	394	439					325	103	55
Lane group cap.		1555	637	692	2489					428	429	383
v/c ratio		0.88	0.38	0.57	0.18					0.76	0.24	0.14
Green ratio		0.42	0.42	0.21	0.67					0.25	0.25	0.25
Unif. delay d1		32.1	24.2	42.7	7.6					41.7	35.9	35.0
Delay factor k		0.40	0.11	0.16	0.11					0.31	0.11	0.11
Increm. delay d2		5.9	0.4	1.1	0.0					7.7	0.3	0.2
PF factor		0.524	0.524	0.825	0.150					0.778	0.778	0.778
Control delay		22.7	13.1	36.3	1.2					40.1	28.2	27.4
Lane group LOS		C	B	D	A					D	C	C
Apprch. delay	21.3			17.8						36.1		
Approach LOS	C			B						D		
Intersec. delay	22.8			Intersection LOS						C		

28-P
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*I-5 SB OFF RAMP/LEUCADIA BLVD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*09/11/08*	Jurisdiction	*ENCINITAS*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2010 NO PROJECT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*0*	*2*	*1*	*2*	*2*	*0*	*0*	*0*	*0*	*1*	*1*	*1*
Lane group		*T*	*R*	*L*	*T*					*L*	*LT*	*R*
Volume (vph)		*1037*	*74*	*282*	*671*					*479*	*1*	*126*
% Heavy veh		*2*	*0*	*0*	*2*					*0*	*0*	*0*
PHF		*0.95*	*0.95*	*0.95*	*0.95*					*0.95*	*0.95*	*0.95*
Actuated (P/A)		*A*	*A*	*A*	*A*					*A*	*A*	*A*
Startup lost time		*2.0*	*2.0*	*2.0*	*2.0*					*2.0*	*2.0*	*2.0*
Ext. eff. green		*2.0*	*2.0*	*2.0*	*2.0*					*2.0*	*2.0*	*2.0*
Arrival type		*5*	*5*	*5*	*5*					*5*	*5*	*5*
Unit Extension		*3.0*	*3.0*	*3.0*	*3.0*					*3.0*	*3.0*	*3.0*
Ped/Bike/RTOR Volume	*0*		*0*				*0*			*0*		*0*
Lane Width		*12.0*	*12.0*	*12.0*	*12.0*					*12.0*	*12.0*	*12.0*
Parking/Grade/Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*		*N*	*N*	*0*	*N*
Parking/hr												
Bus stops/hr		*0*	*0*	*0*	*0*					*0*	*0*	*0*
Unit Extension		*3.0*	*3.0*	*3.0*	*3.0*					*3.0*	*3.0*	*3.0*

Phasing	Thru & RT	WB Only	03	04	SB Only	06	07	08
Timing	G = *45.0*	G = *25.0*	G =	G =	G = *35.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y =	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis (hrs) = *0.25*					Cycle Length C = *120.0*			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		*1092*	*78*	*297*	*706*					*383*	*122*	*133*
Lane group cap.		*1400*	*574*	*692*	*2333*					*499*	*500*	*446*
v/c ratio		*0.78*	*0.14*	*0.43*	*0.30*					*0.77*	*0.24*	*0.30*
Green ratio		*0.38*	*0.38*	*0.21*	*0.63*					*0.29*	*0.29*	*0.29*
Unif. delay d1		*33.1*	*24.7*	*41.3*	*10.4*					*38.8*	*32.4*	*33.0*
Delay factor k		*0.33*	*0.11*	*0.11*	*0.11*					*0.32*	*0.11*	*0.11*
Increm. delay d2		*2.9*	*0.1*	*0.4*	*0.1*					*7.1*	*0.3*	*0.4*
PF factor		*0.600*	*0.600*	*0.825*	*0.133*					*0.725*	*0.725*	*0.725*
Control delay		*22.8*	*14.9*	*34.5*	*1.5*					*35.2*	*23.8*	*24.3*
Lane group LOS		*C*	*B*	*C*	*A*					*D*	*C*	*C*
Apprch. delay		*22.3*		*11.2*						*30.8*		
Approach LOS		*C*		*B*						*C*		
Intersec. delay		*20.3*		Intersection LOS						*C*		

29-A
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 NB OFF RAMP/LEUCADIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	3	0	1	1	2	0	0	0
Lane group	L	T			TR		L	LT	R			
Volume (vph)	750	949			701	354	90	35	276			
% Heavy veh	2	2			2	2	2	2	2			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0		2.0	2.0	2.0			
Ext. eff. green	2.0	2.0			2.0		2.0	2.0	2.0			
Arrival type	5	5			5		5	5	5			
Unit Extension	3.0	3.0			3.0		3.0	3.0	3.0			
Ped/Bike/RTOR Volume				0		200	0		0	0		
Lane Width	12.0	12.0			12.0		12.0	12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0		0	0	0			
Unit Extension	3.0	3.0			3.0		3.0	3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 52.0	G = 28.0	G =	G =	G = 25.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 120.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	789	999			900		95	37	291			
Lane group cap.	726	2644			1213		349	368	553			
v/c ratio	1.09	0.38			0.74		0.27	0.10	0.53			
Green ratio	0.43	0.71			0.23		0.21	0.21	0.21			
Unif. delay d1	34.0	7.0			42.7		39.9	38.4	42.2			
Delay factor k	0.50	0.11			0.30		0.11	0.11	0.13			
Increm. delay d2	59.4	0.1			2.5		0.4	0.1	0.9			
PF factor	0.490	0.171			0.797		0.825	0.825	0.825			
Control delay	76.1	1.3			36.5		33.3	31.8	35.8			
Lane group LOS	E	A			D		C	C	D			
Apprch. delay	34.3			36.5			34.9					
Approach LOS	C			D			C					
Intersec. delay	35.0			Intersection LOS						D		

29-8
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 NB OFF RAMP/LEUCADIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	3	0	1	1	2	0	0	0
Lane group	L	T			TR		L	LT	R			
Volume (vph)	444	1072			741	343	212	45	339			
% Heavy veh	0	2			2	2	2	2	2			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0		2.0	2.0	2.0			
Ext. eff. green	2.0	2.0			2.0		2.0	2.0	2.0			
Arrival type	5	5			5		5	5	5			
Unit Extension	3.0	3.0			3.0		3.0	3.0	3.0			
Ped/Bike/RTOR Volume				0		200	0		0	0		
Lane Width	12.0	12.0			12.0		12.0	12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0		0	0	0			
Unit Extension	3.0	3.0			3.0		3.0	3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 50.0	G = 30.0	G =	G =	G = 25.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	467	1128			931		223	47	357			
Lane group cap.	712	2644			1303		349	368	553			
v/c ratio	0.66	0.43			0.71		0.64	0.13	0.65			
Green ratio	0.42	0.71			0.25		0.21	0.21	0.21			
Unif. delay d1	28.1	7.3			41.1		43.4	38.6	43.4			
Delay factor k	0.23	0.11			0.28		0.22	0.11	0.22			
Increm. delay d2	2.2	0.1			1.9		3.9	0.2	2.6			
PF factor	0.524	0.171			0.778		0.825	0.825	0.825			
Control delay	16.9	1.4			33.8		39.7	32.0	38.4			
Lane group LOS	B	A			C		D	C	D			
Apprch. delay	5.9			33.8			38.4					
Approach LOS	A			C			D					
Intersec. delay	20.6			Intersection LOS						C		

30-A
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/URANIA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	3	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	30	1185	15	15	899	15	91	5	27	225	5	65
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 10.0	G = 50.0	G = 0.0	G =	G = 20.0	G = 15.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 115.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	32	1263		16	962		96	33		237	73	
Lane group cap.	146	1620		146	2317		291	223		291	220	
v/c ratio	0.22	0.78		0.11	0.42		0.33	0.15		0.81	0.33	
Green ratio	0.09	0.43		0.09	0.43		0.17	0.13		0.17	0.13	
Unif. delay d1	48.9	27.8		48.4	22.4		41.6	44.3		45.7	45.4	
Delay factor k	0.11	0.33		0.11	0.11		0.11	0.11		0.36	0.11	
Increm. delay d2	0.8	2.5		0.3	0.1		0.7	0.3		16.2	0.9	
PF factor	0.937	0.487		0.937	0.487		0.860	0.900		0.860	0.900	
Control delay	46.5	16.1		45.7	11.0		36.5	40.2		55.5	41.8	
Lane group LOS	D	B		D	B		D	D		E	D	
Apprch. delay	16.8			11.6			37.4			52.2		
Approach LOS	B			B			D			D		
Intersec. delay	20.0			Intersection LOS						B		

30-P
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/URANIA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	3	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	50	1294	67	80	1004	35	40	5	10	110	5	40
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 10.0	G = 50.0	G = 0.0	G =	G = 20.0	G = 15.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 115.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	53	1433		84	1094		42	16		116	47	
Lane group cap.	146	1611		146	2310		291	229		291	221	
v/c ratio	0.36	0.89		0.58	0.47		0.14	0.07		0.40	0.21	
Green ratio	0.09	0.43		0.09	0.43		0.17	0.13		0.17	0.13	
Unif. delay d1	49.5	30.0		50.5	23.1		40.2	43.9		42.2	44.7	
Delay factor k	0.11	0.41		0.17	0.11		0.11	0.11		0.11	0.11	
Increm. delay d2	1.5	6.6		5.5	0.2		0.2	0.1		0.9	0.5	
PF factor	0.937	0.487		0.937	0.487		0.860	0.900		0.860	0.900	
Control delay	47.9	21.2		52.7	11.4		34.8	39.6		37.1	40.7	
Lane group LOS	D	C		D	B		C	D		D	D	
Apprch. delay	22.1			14.4			36.2			38.2		
Approach LOS	C			B			D			D		
Intersec. delay	20.1			Intersection LOS						C		

31-A

2010 NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/SAXONY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	20	1132	285	230	792	21	95	162	81	44	175	42
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	4	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	100	0	0	0	0	0	0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 17.0	G = 40.0	G = 0.0	G =	G = 10.0	G = 17.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 104.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	21	1387		242	856		100	256		46	228	
Lane group cap.	274	1406		274	1430		161	305		161	311	
v/c ratio	0.08	0.99		0.88	0.60		0.62	0.84		0.29	0.73	
Green ratio	0.16	0.38		0.16	0.38		0.10	0.16		0.10	0.16	
Unif. delay d1	36.9	31.7		42.5	25.6		45.2	42.2		43.7	41.3	
Delay factor k	0.11	0.49		0.41	0.19		0.20	0.37		0.11	0.29	
Increm. delay d2	0.1	20.7		26.9	0.7		7.2	18.4		1.0	8.7	
PF factor	0.870	0.583		0.870	0.583		0.929	0.870		0.929	1.000	
Control delay	32.2	39.3		63.9	15.6		49.2	55.1		41.6	50.0	
Lane group LOS	C	D		E	B		D	E		D	D	
Apprch. delay	39.1			26.3			53.4			48.6		
Approach LOS	D			C			D			D		
Intersec. delay	37.1			Intersection LOS						D		

31-8
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/SAXONY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	35	1214	165	180	934	25	105	56	219	66	207	20
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	100	0	0	0	0	0	0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 12.0	G = 40.0	G = 0.0	G =	G = 8.0	G = 17.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 97.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	37	1346		189	1009		111	290		69	239	
Lane group cap.	207	1528		207	1534		138	303		138	339	
v/c ratio	0.18	0.88		0.91	0.66		0.80	0.96		0.50	0.71	
Green ratio	0.12	0.41		0.12	0.41		0.08	0.18		0.08	0.18	
Unif. delay d1	38.1	26.3		42.0	23.0		43.7	39.6		42.6	37.6	
Delay factor k	0.11	0.41		0.43	0.23		0.35	0.47		0.11	0.27	
Increm. delay d2	0.4	6.3		39.3	1.0		28.2	40.2		2.8	6.5	
PF factor	0.906	0.532		0.906	0.532		0.940	0.858		0.940	0.858	
Control delay	34.9	20.3		77.4	13.3		69.3	74.2		42.9	38.8	
Lane group LOS	C	C		E	B		E	E		D	D	
Apprch. delay	20.7			23.4			72.8			39.7		
Approach LOS	C			C			E			D		
Intersec. delay	29.8			Intersection LOS						C		

32-A
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/SIDONIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	\YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	2	0	0	0	0	1	0	1
Lane group	L	T			TR					L		R
Volume (vph)	30	1215			1019	7				35		13
% Heavy veh	2	2			2	2				2		2
PHF	0.95	0.95			0.95	0.95				0.95		0.95
Actuated (P/A)	A	A			A	A				A		A
Startup lost time	2.0	2.0			2.0					2.0		2.0
Ext. eff. green	2.0	2.0			2.0					2.0		2.0
Arrival type	5	5			5					5		5
Unit Extension	3.0	3.0			3.0					3.0		3.0
Ped/Bike/RTOR Volume				0	0	0	0			0	0	0
Lane Width	12.0	12.0			12.0					12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0					0		0
Unit Extension	3.0	3.0			3.0					3.0		3.0

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 25.0	G = 35.0	G = 0.0	G =	G = 10.0	G = 0.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 85.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	32	1279			1080					37		14
Lane group cap.	493	2855			1536					197		176
v/c ratio	0.06	0.45			0.70					0.19		0.08
Green ratio	0.29	0.76			0.41					0.12		0.12
Unif. delay d1	21.6	3.6			20.7					33.8		33.4
Delay factor k	0.11	0.11			0.27					0.11		0.11
Increm. delay d2	0.1	0.1			1.5					0.5		0.2
PF factor	0.722	0.213			0.533					0.911		0.911
Control delay	15.6	0.9			12.5					31.3		30.6
Lane group LOS	B	A			B					C		C
Apprch. delay	1.2			12.5						31.1		
Approach LOS	A			B						C		
Intersec. delay	6.8			Intersection LOS						A		

32-P

2010

NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/SIDONIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	\YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	2	0	0	0	0	1	0	1
Lane group	L	T			TR					L		R
Volume (vph)	35	1432			1102	25				16		8
% Heavy veh	2	2			2	2				2		2
PHF	0.95	0.95			0.95	0.95				0.95		0.95
Actuated (P/A)	A	A			A	A				A		A
Startup lost time	2.0	2.0			2.0					2.0		2.0
Ext. eff. green	2.0	2.0			2.0					2.0		2.0
Arrival type	5	5			5					5		5
Unit Extension	3.0	3.0			3.0					3.0		3.0
Ped/Bike/RTOR Volume				0	0	0	0			0	0	0
Lane Width	12.0	12.0			12.0					12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0					0		0
Unit Extension	3.0	3.0			3.0					3.0		3.0

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 25.0	G = 35.0	G = 0.0	G =	G = 10.0	G = 0.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 85.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	37	1507			1186					17		8
Lane group cap.	493	2855			1532					197		176
v/c ratio	0.08	0.53			0.77					0.09		0.05
Green ratio	0.29	0.76			0.41					0.12		0.12
Unif. delay d1	21.7	3.9			21.6					33.4		33.3
Delay factor k	0.11	0.13			0.32					0.11		0.11
Increm. delay d2	0.1	0.2			2.5					0.2		0.1
PF factor	0.722	0.213			0.533					0.911		0.911
Control delay	15.7	1.0			14.1					30.6		30.4
Lane group LOS	B	A			B					C		C
Apprch. delay	1.4			14.1						30.6		
Approach LOS	A			B						C		
Intersec. delay	7.1			Intersection LOS						A		

33-A

2010 NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/QUAIL GARDENS DR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Lane group	L	TR		L	TR		L	T	R	L	T	R
Volume (vph)	30	1105	115	350	896	16	120	25	275	60	80	10
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5		5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0	0	0	0	0	0	175	0	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 29.0	G = 46.0	G = 0.0	G =	G = 13.0	G = 12.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	32	1284		368	960		126	26	105	63	84	11
Lane group cap.	405	1411		405	1427		182	196	575	182	196	150
v/c ratio	0.08	0.91		0.91	0.67		0.69	0.13	0.18	0.35	0.43	0.07
Green ratio	0.24	0.38		0.24	0.38		0.11	0.10	0.38	0.11	0.10	0.10
Unif. delay d1	35.2	35.0		44.2	30.7		51.6	49.3	24.5	49.6	50.8	49.0
Delay factor k	0.11	0.43		0.43	0.24		0.26	0.11	0.11	0.11	0.11	0.11
Increm. delay d2	0.1	9.1		24.0	1.3		10.7	0.3	0.2	1.1	1.5	0.2
PF factor	0.788	0.586		0.788	0.586		0.919	0.926	0.586	0.919	0.926	0.926
Control delay	27.8	29.6		58.8	19.3		58.1	45.9	14.5	46.7	48.5	45.5
Lane group LOS	C	C		E	B		E	D	B	D	D	D
Apprch. delay	29.5			30.2			39.1			47.6		
Approach LOS	C			C			D			D		
Intersec. delay	31.6			Intersection LOS						C		

33 R

2010 NP

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*LEUCADIA BLVD/QUAIL GARDENS DR*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*09/12/08*	Jurisdiction	*ENCINITAS*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2010 NO PROJECT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Lane group	L	TR		L	TR		L	T	R	L	T	R
Volume (vph)	10	1363	75	348	1007	50	85	25	138	85	25	35
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5		5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 27.0	G = 51.0	G = 0.0	G =	G = 12.0	G = 10.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	11	1514		366	1113		89	26	145	89	26	37
Lane group cap.	377	1574		377	1575		168	163	525	168	163	125
v/c ratio	0.03	0.96		0.97	0.71		0.53	0.16	0.28	0.53	0.16	0.30
Green ratio	0.22	0.43		0.22	0.43		0.10	0.08	0.35	0.10	0.08	0.08
Unif. delay d1	36.3	33.6		46.1	28.4		51.3	51.1	28.1	51.3	51.1	51.7
Delay factor k	0.11	0.47		0.48	0.27		0.13	0.11	0.11	0.13	0.11	0.11
Increm. delay d2	0.0	14.6		38.5	1.5		3.2	0.5	0.3	3.2	0.5	1.3
PF factor	0.806	0.507		0.806	0.507		0.926	0.939	0.641	0.926	0.939	0.939
Control delay	29.3	31.7		75.7	15.9		50.7	48.5	18.3	50.7	48.5	49.9
Lane group LOS	C	C		E	B		D	D	B	D	D	D
Apprch. delay	31.6			30.7			32.4			50.1		
Approach LOS	C			C			C			D		
Intersec. delay	32.1			Intersection LOS						C		

3A-A 2010 NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/GARDEN VIEW RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	2	2	0	2	2	0	2	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	230	910	300	240	829	20	215	141	30	10	260	218
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0		65	0	0	0	0	0	0	0	0	100
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 49.0	G = 0.0	G =	G = 13.0	G = 25.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 4	Y = 4	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	242	1205		253	894		226	180		11	398	
Lane group cap.	407	1478		407	1519		353	757		353	741	
v/c ratio	0.59	0.82		0.62	0.59		0.64	0.24		0.03	0.54	
Green ratio	0.13	0.41		0.13	0.41		0.11	0.21		0.11	0.21	
Unif. delay d1	49.6	31.5		49.8	27.6		51.3	39.6		47.9	42.3	
Delay factor k	0.18	0.36		0.20	0.18		0.22	0.11		0.11	0.14	
Increm. delay d2	2.4	3.7		2.9	0.6		3.9	0.2		0.0	0.8	
PF factor	0.905	0.540		0.905	0.540		0.919	0.825		0.919	0.825	
Control delay	47.3	20.7		48.0	15.5		51.0	32.8		44.0	35.7	
Lane group LOS	D	C		D	B		D	C		D	D	
Apprch. delay	25.1			22.7			42.9			35.9		
Approach LOS	C			C			D			D		
Intersec. delay	27.7			Intersection LOS						C		

3AB
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*LEUCADIA BLVD/GARDEN VIEW RD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*09/12/08*	Jurisdiction	*ENCINITAS*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2010 NO PROJECT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*2*	*2*	*0*	*2*	*2*	*0*	*2*	*2*	*0*	*2*	*2*	*0*
Lane group	*L*	*TR*		*L*	*TR*		*L*	*TR*		*L*	*TR*	
Volume (vph)	*300*	*961*	*325*	*240*	*796*	*85*	*295*	*150*	*55*	*100*	*367*	*314*
% Heavy veh	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Actuated (P/A)	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*
Startup lost time	*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	
Ext. eff. green	*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*		*2.0*	*2.0*	
Arrival type	*5*	*5*		*5*	*5*		*5*	*5*		*5*	*5*	
Unit Extension	*3.0*	*3.0*		*3.0*	*3.0*		*3.0*	*3.0*		*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*0*		*65*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*100*
Lane Width	*12.0*	*12.0*		*12.0*	*12.0*		*12.0*	*12.0*		*12.0*	*12.0*	
Parking/Grade/Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking/hr												
Bus stops/hr	*0*	*0*		*0*	*0*		*0*	*0*		*0*	*0*	
Unit Extension	*3.0*	*3.0*		*3.0*	*3.0*		*3.0*	*3.0*		*3.0*	*3.0*	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = *15.0*	G = *49.0*	G = *0.0*	G =	G = *13.0*	G = *23.0*	G = *0.0*	G =
	Y = *5*	Y = *5*	Y =	Y =	Y = *5*	Y = *5*	Y =	Y =

Duration of Analysis (hrs) = *0.25* | Cycle Length C = *120.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	*316*	*1286*		*253*	*927*		*311*	*216*		*105*	*611*	
Lane group cap.	*407*	*1476*		*407*	*1503*		*353*	*687*		*353*	*676*	
v/c ratio	*0.78*	*0.87*		*0.62*	*0.62*		*0.88*	*0.31*		*0.30*	*0.90*	
Green ratio	*0.13*	*0.41*		*0.13*	*0.41*		*0.11*	*0.19*		*0.11*	*0.19*	
Unif. delay d1	*50.9*	*32.6*		*49.8*	*28.1*		*52.7*	*41.7*		*49.3*	*47.4*	
Delay factor k	*0.33*	*0.40*		*0.20*	*0.20*		*0.41*	*0.11*		*0.11*	*0.42*	
Increm. delay d2	*9.2*	*6.0*		*2.9*	*0.8*		*21.8*	*0.3*		*0.5*	*15.6*	
PF factor	*0.905*	*0.540*		*0.905*	*0.540*		*0.919*	*0.842*		*0.919*	*0.842*	
Control delay	*55.2*	*23.6*		*48.0*	*15.9*		*70.3*	*35.4*		*45.8*	*55.6*	
Lane group LOS	*E*	*C*		*D*	*B*		*E*	*D*		*D*	*E*	
Apprch. delay	*29.8*			*22.8*			*56.0*			*54.1*		
Approach LOS	*C*			*C*			*E*			*D*		
Intersec. delay	*35.5*			Intersection LOS						*D*		

25-A

2010

NP

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*LEUCADIA BLVD/TOWN CENTER PL.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*09/12/08*	Jurisdiction	*ENCINITAS*
Time Period	*AM PEAK HOUR*	Analysis Year	*YEAR 2010 NO PROJECT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	1	1	2	0	1	1	1
Lane group	L	T	R	L	T	R	L	LTR		L	LT	R
Volume (vph)	73	744	133	210	924	115	80	17	65	75	18	85
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	NB Only	07	08
Timing	G = *15.0*	G = *50.0*	G = *0.0*	G =	G = *11.0*	G = *19.0*	G = *0.0*	G =
	Y = *5*	Y = *5*	Y =	Y =	Y = *5*	Y = *5*	Y =	Y =

Duration of Analysis (hrs) = *0.25* | Cycle Length C = *115.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	77	783	140	221	973	121	59	111		55	43	89
Lane group cap.	425	1623	652	425	1623	652	277	554		160	183	143
v/c ratio	0.18	0.48	0.21	0.52	0.60	0.19	0.21	0.20		0.34	0.23	0.62
Green ratio	0.13	0.43	0.43	0.13	0.43	0.43	0.17	0.17		0.10	0.10	0.10
Unif. delay d1	44.5	23.2	20.3	46.6	24.8	20.0	41.5	41.4		48.6	48.1	50.0
Delay factor k	0.11	0.11	0.11	0.13	0.19	0.11	0.11	0.11		0.11	0.11	0.21
Increm. delay d2	0.2	0.2	0.2	1.1	0.6	0.1	0.4	0.2		1.3	0.7	8.1
PF factor	0.900	0.487	0.487	0.900	0.487	0.487	0.868	0.868		0.929	0.929	0.929
Control delay	40.3	11.6	10.0	43.1	12.7	9.9	36.4	36.2		46.5	45.4	54.6
Lane group LOS	D	B	B	D	B	A	D	D		D	D	D
Apprch. delay	13.6			17.6			36.3			50.1		
Approach LOS	B			B			D			D		
Intersec. delay	19.5			Intersection LOS						B		

35P
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/TOWN CENTER PL.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	1	1	2	0	1	1	1
Lane group	L	T	R	L	T	R	L	LTR		L	LT	R
Volume (vph)	160	741	215	240	491	249	260	60	285	140	59	240
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0	0	0	0	0	0	0	0	0	80
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	NB Only	07	08
Timing	G = 16.0	G = 45.0	G = 0.0	G =	G = 19.0	G = 20.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	168	780	226	253	517	262	192	445		88	121	168
Lane group cap.	434	1400	563	434	1400	563	279	554		265	303	237
v/c ratio	0.39	0.56	0.40	0.58	0.37	0.47	0.69	0.80		0.33	0.40	0.71
Green ratio	0.13	0.38	0.38	0.13	0.38	0.38	0.17	0.17		0.16	0.16	0.16
Unif. delay d1	47.5	29.6	27.6	48.9	27.2	28.4	47.1	48.1		44.9	45.4	47.9
Delay factor k	0.11	0.15	0.11	0.17	0.11	0.11	0.26	0.35		0.11	0.11	0.27
Increm. delay d2	0.6	0.5	0.5	2.0	0.2	0.6	7.0	8.4		0.7	0.9	9.4
PF factor	0.897	0.600	0.600	0.897	0.600	0.600	0.867	0.867		0.875	0.875	0.875
Control delay	43.2	18.3	17.0	45.9	16.5	17.6	47.8	50.1		40.0	40.5	51.3
Lane group LOS	D	B	B	D	B	B	D	D		D	D	D
Apprch. delay	21.6			24.0			49.4			45.2		
Approach LOS	C			C			D			D		
Intersec. delay	30.6			Intersection LOS						C		

36-A
2010
MP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	ECR/LEUCADIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	0	2	3	1	2	4	0
Lane group	L	T	R	L	TR		L	T	R	L	TR	
Volume (vph)	205	474	205	1084	1009	85	100	1810	756	125	701	140
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5		5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	300	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 10.0	G = 29.0	G = 16.0	G = 0.0	G = 7.0	G = 43.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	216	499	216	1141	1151		105	1905	480	132	885	
Lane group cap.	250	657	323	1102	2030		175	1767	669	175	2297	
v/c ratio	0.86	0.76	0.67	1.04	0.57		0.60	1.08	0.72	0.75	0.39	
Green ratio	0.08	0.12	0.22	0.34	0.38		0.05	0.33	0.45	0.05	0.33	
Unif. delay d1	59.3	55.1	46.7	43.0	31.5		60.1	43.5	29.3	60.7	33.4	
Delay factor k	0.39	0.31	0.24	0.50	0.16		0.19	0.50	0.28	0.31	0.11	
Increm. delay d2	25.5	5.2	5.3	36.7	0.4		5.6	45.9	3.7	16.9	0.1	
PF factor	0.944	0.906	0.817	0.659	0.583		0.962	0.670	0.463	0.962	0.670	
Control delay	81.5	55.1	43.4	65.0	18.7		63.5	75.1	17.3	75.2	22.5	
Lane group LOS	F	E	D	E	B		E	E	B	E	C	
Apprch. delay	58.5			41.8			63.4			29.3		
Approach LOS	E			D			E			C		
Intersec. delay	50.2			Intersection LOS						D		

36-P
2010
NR

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*ECR/LEUCADIA BLVD.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*09/12/08*	Jurisdiction	*ENCINITAS*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2010 NO PROJECT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	0	2	3	1	2	4	0
Lane group	L	T	R	L	TR		L	T	R	L	TR	
Volume (vph)	245	651	270	618	605	125	305	820	989	282	1502	70
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5		5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	5	0	150	5	0	0	5	0	350	5	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 16.0	G = 15.0	G = 24.0	G = 0.0	G = 16.0	G = 34.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y = 0	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	258	685	126	651	769		321	863	673	297	1655	
Lane group cap.	401	986	515	902	1759		401	1397	860	401	1850	
v/c ratio	0.64	0.69	0.24	0.72	0.44		0.80	0.62	0.78	0.74	0.89	
Green ratio	0.12	0.18	0.35	0.28	0.34		0.12	0.26	0.58	0.12	0.26	
Unif. delay d1	54.3	49.6	30.4	42.5	33.4		55.4	42.3	21.2	55.0	46.3	
Delay factor k	0.22	0.26	0.11	0.28	0.11		0.34	0.20	0.33	0.30	0.42	
Increm. delay d2	3.5	2.1	0.2	2.9	0.2		11.0	0.8	4.7	7.2	6.1	
PF factor	0.906	0.849	0.647	0.745	0.659		0.906	0.764	0.118	0.906	0.764	
Control delay	52.7	44.2	19.9	34.5	22.2		61.3	33.1	7.3	57.0	41.5	
Lane group LOS	D	D	B	C	C		E	C	A	E	D	
Apprch. delay	43.4			27.8			28.6			43.8		
Approach LOS	D			C			C			D		
Intersec. delay	35.7			Intersection LOS						D		

37-A
2010
AM

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OLIVENHAIN RD./AMARGOSA DR.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Volume (vph)	65	1240	50	75	1838	20	140	10	68	20	10	200
% Heavy veh	0	2	0	0	2	2	2	2	2	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0		2.0	2.0			2.0			2.0	
Arrival type	5	5		5	5			5			5	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	25	0	0	50
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0			0	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 10.0	G = 60.0	G =	G =	G = 30.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 115.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	68	1358		79	1956			203			190	
Lane group cap.	149	1938		149	1945			282			397	
v/c ratio	0.46	0.70		0.53	1.01			0.72			0.48	
Green ratio	0.09	0.52		0.09	0.52			0.26			0.26	
Unif. delay d1	49.9	20.7		50.3	27.5			38.7			35.9	
Delay factor k	0.11	0.27		0.13	0.50			0.28			0.11	
Increm. delay d2	2.2	1.1		3.6	21.8			8.6			0.9	
PF factor	0.937	0.273		0.937	0.273			0.765			0.765	
Control delay	49.0	6.8		50.6	29.3			38.2			28.4	
Lane group LOS	D	A		D	C			D			C	
Apprch. delay	8.8			30.1			38.2			28.4		
Approach LOS	A			C			D			C		
Intersec. delay	22.6			Intersection LOS						C		

37-8

2010

NB

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*OLIVENHAIN RD./AMARGOSA DR.*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*09/12/08*	Jurisdiction	*CARLSBAD*
Time Period	*PM PEAK HOUR*	Analysis Year	*YEAR 2010 NO PROJECT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*1*	*2*	*0*	*1*	*2*	*0*	*0*	*1*	*0*	*0*	*1*	*0*
Lane group	*L*	*TR*		*L*	*TR*			*LTR*			*LTR*	
Volume (vph)	*150*	*1662*	*110*	*75*	*1203*	*20*	*80*	*10*	*40*	*10*	*15*	*65*
% Heavy veh	*0*	*2*	*0*	*0*	*2*	*2*	*2*	*2*	*2*	*0*	*0*	*0*
PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Actuated (P/A)	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*
Startup lost time	*2.0*	*2.0*		*2.0*	*2.0*			*2.0*			*2.0*	
Ext. eff. green	*2.0*	*2.0*		*2.0*	*2.0*			*2.0*			*2.0*	
Arrival type	*5*	*5*		*5*	*5*			*5*			*5*	
Unit Extension	*3.0*	*3.0*		*3.0*	*3.0*			*3.0*			*3.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*25*	*0*	*0*	*50*
Lane Width	*12.0*	*12.0*		*12.0*	*12.0*			*12.0*			*12.0*	
Parking/Grade/Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking/hr												
Bus stops/hr	*0*	*0*		*0*	*0*			*0*			*0*	
Unit Extension	*3.0*	*3.0*		*3.0*	*3.0*			*3.0*			*3.0*	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = *15.0*	G = *60.0*	G =	G =	G = *30.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y =	Y =	Y = *5*	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25* | Cycle Length C = *120.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	*158*	*1865*		*79*	*1287*			*111*			*43*	
Lane group cap.	*214*	*1852*		*214*	*1862*			*328*			*399*	
v/c ratio	*0.74*	*1.01*		*0.37*	*0.69*			*0.34*			*0.11*	
Green ratio	*0.13*	*0.50*		*0.13*	*0.50*			*0.25*			*0.25*	
Unif. delay d1	*50.6*	*30.0*		*48.2*	*22.9*			*36.9*			*34.7*	
Delay factor k	*0.30*	*0.50*		*0.11*	*0.26*			*0.11*			*0.11*	
Increm. delay d2	*12.7*	*22.6*		*1.1*	*1.1*			*0.6*			*0.1*	
PF factor	*0.905*	*0.333*		*0.905*	*0.333*			*0.778*			*0.778*	
Control delay	*58.5*	*32.6*		*44.7*	*8.8*			*29.3*			*27.1*	
Lane group LOS	*E*	*C*		*D*	*A*			*C*			*C*	
Apprch. delay	*34.6*			*10.8*			*29.3*			*27.1*		
Approach LOS	*C*			*B*			*C*			*C*		
Intersec. delay	*25.2*			Intersection LOS						*C*		

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

STOP SIGN WITHOUT PROJECT

38-A
2010
NP

Analyst:	USAI
Agency/Co.:	USAI
Date Performed:	09/12/08
Analysis Time Period:	AM PEAK HOUR
Intersection:	LA COSTA AVE./CAL. TIMITEO
Jurisdiction:	CARLSBAD
Units: U. S. Customary	
Analysis Year:	YEAR 2010 NO PROJECT
Project ID:	LA COSTA TOWN SQUARE
East/West Street:	LA COSTA AVENUE
North/South Street:	CALLE TIMITEO
Intersection Orientation:	EW

Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		333	28	8	275	
Peak-Hour Factor, PHF		0.95	0.95	0.95	0.95	
Hourly Flow Rate, HFR		350	29	8	289	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		2	0	1	2	
Configuration		T	TR	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	102	0	24			
Peak Hour Factor, PHF	0.95	0.95	0.95			
Hourly Flow Rate, HFR	107	0	25			
Percent Heavy Vehicles	0	0	0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0	1	0			
Configuration		LTR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L		LTR				
v (vph)		8		132				
C(m) (vph)		1191		526				
v/c		0.01		0.25				
95% queue length		0.02		0.99				
Control Delay		8.0		14.1				
LOS		A		B				
Approach Delay				14.1				
Approach LOS				B				

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

28-P
2010
NP

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/12/08
Analysis Time Period: PM PEAK HOUR
Intersection: LA COSTA AVE./CAL. TIMITEO
Jurisdiction: CARLSBAD
Units: U. S. Customary
Analysis Year: YEAR 2010 NO PROJECT
Project ID: LA COSTA TOWN SQUARE
East/West Street: LA COSTA AVENUE
North/South Street: CALLE TIMITEO
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		197	130	9	203	
Peak-Hour Factor, PHF		0.95	0.95	0.95	0.95	
Hourly Flow Rate, HFR		207	136	9	213	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		2	0	1	2	
Configuration		T	TR	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	70	0	7			
Peak Hour Factor, PHF	0.95	0.95	0.95			
Hourly Flow Rate, HFR	73	0	7			
Percent Heavy Vehicles	0	0	0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0	1	0			
Configuration		LTR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L		LTR				
v (vph)		9		80				
C(m) (vph)		1227		596				
v/c		0.01		0.13				
95% queue length		0.02		0.46				
Control Delay		8.0		12.0				
LOS		A		B				
Approach Delay				12.0				
Approach LOS				B				

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

39-A
2010
NP

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/15/08
Analysis Time Period: AM PEAK HOUR
Intersection: LA COSTA AVE./CAM. DE LOS COCH
Jurisdiction: CARLSBAD
Units: U. S. Customary
Analysis Year: YEAR 2010 NO PROJECT
Project ID: LA COSTA TOWN SQUARE
East/West Street: LA COSTA AVENUE
North/South Street: CAMINO DE LOS COCHES
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		72	285	52	113	
Peak-Hour Factor, PHF		0.95	0.95	0.95	0.95	
Hourly Flow Rate, HFR		75	300	54	118	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?			No			
Lanes		1	1	1	1	
Configuration		T	R	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	170	0	18			
Peak Hour Factor, PHF	0.95	0.95	0.95			
Hourly Flow Rate, HFR	178	0	18			
Percent Heavy Vehicles	0	0	0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0	1	0			
Configuration		LTR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L		LTR				
v (vph)		54		196				
C(m) (vph)		1195		685				
v/c		0.05		0.29				
95% queue length		0.14		1.18				
Control Delay		8.2		12.3				
LOS		A		B				
Approach Delay				12.3				
Approach LOS				B				

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

39-8
2010
NP

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/15/08
Analysis Time Period: PM PEAK HOUR
Intersection: LA COSTA AVE./CAM. DE LOS COCH
Jurisdiction: CARLSBAD
Units: U. S. Customary
Analysis Year: YEAR 2010 NO PROJECT
Project ID: LA COSTA TOWN SQUARE
East/West Street: LA COSTA AVENUE
North/South Street: CAMINO DE LOS COCHES
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		118	86	24	21	
Peak-Hour Factor, PHF		0.95	0.95	0.95	0.95	
Hourly Flow Rate, HFR		124	90	25	22	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?			No			
Lanes		1	1	1	1	
Configuration		T	R	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	191	0	26			
Peak Hour Factor, PHF	0.95	0.95	0.95			
Hourly Flow Rate, HFR	201	0	27			
Percent Heavy Vehicles	0	0	0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0	1	0			
Configuration		LTR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L		LTR				
v (vph)		25		228				
C(m) (vph)		1368		797				
v/c		0.02		0.29				
95% queue length		0.06		1.18				
Control Delay		7.7		11.3				
LOS		A		B				
Approach Delay				11.3				
Approach LOS				B				

40-A

2010 NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR./SAN ELIJO RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	SAN MARCOS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	1	1	2	1	1	1	0	1	1	1
Lane group	L	T	R	L	T	R	L	TR		L	LT	R
Volume (vph)	50	501	85	110	586	276	281	200	140	200	100	90
% Heavy veh	2	2	0	0	2	2	0	0	0	2	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	10
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	NB Only	07	08
Timing	G = 15.0	G = 45.0	G =	G =	G = 20.0	G = 30.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	53	527	89	116	617	291	296	358		137	179	84
Lane group cap.	193	1292	530	197	1292	519	395	433		258	299	235
v/c ratio	0.27	0.41	0.17	0.59	0.48	0.56	0.75	0.83		0.53	0.60	0.36
Green ratio	0.12	0.35	0.35	0.12	0.35	0.35	0.23	0.23		0.15	0.15	0.15
Unif. delay d1	52.5	32.4	29.5	54.6	33.3	34.5	46.5	47.5		50.7	51.3	49.2
Delay factor k	0.11	0.11	0.11	0.18	0.11	0.16	0.30	0.36		0.13	0.19	0.11
Increm. delay d2	0.8	0.2	0.2	4.6	0.3	1.4	7.8	12.5		2.1	3.3	0.9
PF factor	0.913	0.647	0.647	0.913	0.647	0.647	0.800	0.800		0.879	0.879	0.879
Control delay	48.7	21.1	19.2	54.4	21.8	23.7	45.0	50.5		46.6	48.3	44.2
Lane group LOS	D	C	B	D	C	C	D	D		D	D	D
Apprch. delay	23.1			26.0			48.0			46.9		
Approach LOS	C			C			D			D		
Intersec. delay	33.6			Intersection LOS						C		

40-8

2010

NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR./SAN ELIJO RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	SAN MARCOS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	1	1	2	1	1	1	0	1	1	1
Lane group	L	T	R	L	T	R	L	TR		L	LT	R
Volume (vph)	37	503	157	125	778	240	54	100	70	500	200	44
% Heavy veh	2	2	0	0	2	2	0	0	0	2	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	15	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	NB Only	07	08
Timing	G = 16.0	G = 47.0	G =	G =	G = 31.0	G = 16.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	39	529	165	132	819	253	57	163		342	395	46
Lane group cap.	206	1350	553	210	1350	542	210	233		400	462	365
v/c ratio	0.19	0.39	0.30	0.63	0.61	0.47	0.27	0.70		0.86	0.85	0.13
Green ratio	0.12	0.36	0.36	0.12	0.36	0.36	0.12	0.12		0.24	0.24	0.24
Unif. delay d1	51.2	30.9	29.7	54.2	33.9	31.9	51.7	54.7		47.4	47.3	38.9
Delay factor k	0.11	0.11	0.11	0.21	0.19	0.11	0.11	0.27		0.39	0.39	0.11
Increm. delay d2	0.4	0.2	0.3	5.9	0.8	0.6	0.7	9.0		16.4	14.5	0.2
PF factor	0.906	0.622	0.622	0.906	0.622	0.622	0.906	0.906		0.791	0.791	0.791
Control delay	46.8	19.4	18.8	55.0	21.9	20.5	47.6	58.5		53.9	52.0	30.9
Lane group LOS	D	B	B	D	C	C	D	E		D	D	C
Apprch. delay	20.7			25.2			55.7			51.6		
Approach LOS	C			C			E			D		
Intersec. delay	33.4			Intersection LOS						C		

HCS2000: Unsignalized Intersections Release 4.1f

41-A

TWO-WAY STOP CONTROL SUMMARY

2010 NP

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/15/08
Analysis Time Period: AM PEAK HOUR
Intersection: FALLSVIEW RD./SAN ELIJO RD.
Jurisdiction: SAN MARCOS
Units: U. S. Customary
Analysis Year: YEAR 2010 NO PROJECT
Project ID: LA COSTA TOWN SQUARE
East/West Street: SAN ELIJO RD.
North/South Street: FALLSVIEW RD.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		806	29			
Peak-Hour Factor, PHF		0.95	0.95			
Hourly Flow Rate, HFR		848	30			
Percent Heavy Vehicles		--	--		--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes		2	0			
Configuration		T	TR			
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume			79			
Peak Hour Factor, PHF			0.95			
Hourly Flow Rate, HFR			83			
Percent Heavy Vehicles			0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes			1			
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config					R			
v (vph)					83			
C(m) (vph)					622			
v/c					0.13			
95% queue length					0.46			
Control Delay					11.7			
LOS					B			
Approach Delay				11.7				
Approach LOS				B				

HCS2000: Unsignalized Intersections Release 4.1f

41-P
2010 NP

TWO-WAY STOP CONTROL SUMMARY

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/15/08
Analysis Time Period: PM PEAK HOUR
Intersection: FALLSVIEW RD./SAN ELIJO RD.
Jurisdiction: SAN MARCOS
Units: U. S. Customary
Analysis Year: YEAR 2010 NO PROJECT
Project ID: LA COSTA TOWN SQUARE
East/West Street: SAN ELIJO RD.
North/South Street: FALLSVIEW RD.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		1016	56			
Peak-Hour Factor, PHF		0.95	0.95			
Hourly Flow Rate, HFR		1069	58			
Percent Heavy Vehicles		--	--		--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes		2	0			
Configuration		T	TR			
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume			50			
Peak Hour Factor, PHF			0.95			
Hourly Flow Rate, HFR			52			
Percent Heavy Vehicles			0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes			1			
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config					R			
v (vph)					52			
C(m) (vph)					529			
v/c					0.10			
95% queue length					0.33			
Control Delay					12.5			
LOS					B			
Approach Delay					12.5			
Approach LOS					B			

HCS2000: Unsignalized Intersections Release 4.1f

A2-A
2010
NP

TWO-WAY STOP CONTROL SUMMARY

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/15/08
Analysis Time Period: AM PEAK HOUR
Intersection: LA COSTA AVE./WEST DRIVEWAY
Jurisdiction: CARLSBAD
Units: U. S. Customary
Analysis Year: YEAR 2010 NO PROJECT
Project ID: LA COSTA TOWN SQUARE
East/West Street: LA COSTA AVENUE
North/South Street: WEST DWY. # 1
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		351	15	40	336	
Peak-Hour Factor, PHF		0.95	0.95	0.95	0.95	
Hourly Flow Rate, HFR		369	15	42	353	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?			No			
Lanes		2	1	1	2	
Configuration		T	R	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	10	0	10			
Peak Hour Factor, PHF	0.95	0.95	0.95			
Hourly Flow Rate, HFR	10	0	10			
Percent Heavy Vehicles	0	0	0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0	1	0			
Configuration		LTR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L		LTR				
v (vph)		42		20				
C(m) (vph)		1186		544				
v/c		0.04		0.04				
95% queue length		0.11		0.11				
Control Delay		8.1		11.9				
LOS		A		B				
Approach Delay				11.9				
Approach LOS				B				

HCS2000: Unsignalized Intersections Release 4.1f

A2-9

TWO-WAY STOP CONTROL SUMMARY

2010 NP

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/15/08
Analysis Time Period: PM PEAK HOUR
Intersection: LA COSTA AVE./WEST DRIVEWAY
Jurisdiction: CARLSBAD
Units: U. S. Customary
Analysis Year: YEAR 2010 NO PROJECT
Project ID: LA COSTA TOWN SQUARE
East/West Street: LA COSTA AVENUE
North/South Street: WEST DWY. # 1
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		302	35	25	248	
Peak-Hour Factor, PHF		0.95	0.95	0.95	0.95	
Hourly Flow Rate, HFR		317	36	26	261	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?			No			
Lanes		2	1	1	2	
Configuration		T	R	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	30	0	25			
Peak Hour Factor, PHF	0.95	0.95	0.95			
Hourly Flow Rate, HFR	31	0	26			
Percent Heavy Vehicles	0	0	0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0	1	0			
Configuration		LTR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L		LTR				
v (vph)		26		57				
C(m) (vph)		1217		615				
v/c		0.02		0.09				
95% queue length		0.07		0.31				
Control Delay		8.0		11.5				
LOS		A		B				
Approach Delay				11.5				
Approach LOS				B				

43 A&P

YEAR 2010
NP

INTERSECTION #43

LA COSTA AVENUE / EASST DRIVEWAY #3 / PASEO TAMARINDO

There is no intersection at this location under existing condition. This intersection will be added with the easterly single-family portion of the project. The intersection will be stop sign controlled, facing southbound traffic.

44 A&P

YEAR 2010

NP

INTERSECTION #44

RANCHO SANTA FE / PROJECT DRIVEWAY #4

This will be a right-in-only driveway with no conflicting movements, so LOS does not apply.

45-A
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO STA. FE/EAST DWY.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/15/09	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	0	0	3	1	0	0	0	1	0	0
Lane group	L	T			T	R				L	LR	
Volume (vph)	33	1695			1414	18				48		101
% Heavy veh	0	2			2	2				0		0
PHF	0.95	0.95			0.95	0.95				0.95		0.95
Actuated (P/A)	A	A			A	A				A		A
Startup lost time	2.0	2.0			2.0	2.0				2.0	2.0	
Ext. eff. green	2.0	2.0			2.0	2.0				2.0	2.0	
Arrival type	5	5			5	5				5	4	
Unit Extension	3.0	3.0			3.0	3.0				3.0	3.0	
Ped/Bike/RTOR Volume				0		0	0			0	0	25
Lane Width	12.0	12.0			12.0	12.0				12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0	0				0	0	
Unit Extension	3.0	3.0			3.0	3.0				3.0	3.0	

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 10.0	G = 50.0	G =	G =	G = 15.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	35	1784			1488	19				39	92	
Lane group cap.	190	3857			2967	833				285	274	
v/c ratio	0.18	0.46			0.50	0.02				0.14	0.34	
Green ratio	0.11	0.72			0.56	0.56				0.17	0.17	
Unif. delay d1	36.3	5.2			12.3	9.0				32.0	33.1	
Delay factor k	0.11	0.11			0.11	0.11				0.11	0.11	
Increm. delay d2	0.5	0.1			0.1	0.0				0.2	0.7	
PF factor	0.917	0.180			0.167	0.167				0.867	1.000	
Control delay	33.7	1.0			2.2	1.5				27.9	33.8	
Lane group LOS	C	A			A	A				C	C	
Apprch. delay	1.7			2.2						32.1		
Approach LOS	A			A						C		
Intersec. delay	3.0			Intersection LOS						A		

AB-8

2010 NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO STA. FE/EAST DWY.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/15/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	0	0	3	1	0	0	0	1	0	0
Lane group	L	T			T	R				L	LR	
Volume (vph)	96	1251			1547	46				12		27
% Heavy veh	0	2			2	2				0		0
PHF	0.95	0.95			0.95	0.95				0.95		0.95
Actuated (P/A)	A	A			A	A				A		A
Startup lost time	2.0	2.0			2.0	2.0				2.0	2.0	
Ext. eff. green	2.0	2.0			2.0	2.0				2.0	2.0	
Arrival type	5	5			5	5				5	4	
Unit Extension	3.0	3.0			3.0	3.0				3.0	3.0	
Ped/Bike/RTOR Volume				0		0	0			0	0	25
Lane Width	12.0	12.0			12.0	12.0				12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0	0				0	0	
Unit Extension	3.0	3.0			3.0	3.0				3.0	3.0	

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 10.0	G = 50.0	G =	G =	G = 15.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	101	1317			1628	48				10	5	
Lane group cap.	190	3857			2967	833				285	289	
v/c ratio	0.53	0.34			0.55	0.06				0.04	0.02	
Green ratio	0.11	0.72			0.56	0.56				0.17	0.17	
Unif. delay d1	37.8	4.6			12.8	9.2				31.4	31.3	
Delay factor k	0.13	0.11			0.15	0.11				0.11	0.11	
Increm. delay d2	2.9	0.1			0.2	0.0				0.1	0.0	
PF factor	0.917	0.180			0.167	0.167				0.867	1.000	
Control delay	37.5	0.9			2.3	1.6				27.3	31.4	
Lane group LOS	D	A			A	A				C	C	
Apprch. delay	3.5			2.3						28.7		
Approach LOS	A			A						C		
Intersec. delay	3.0			Intersection LOS						A		

Ab-A
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE RD../CALLE ACERVO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/15/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	0	1	0	1	1	0	1	1	1
Lane group		LTR			LTR		L	TR		L	T	R
Volume (vph)	160	200	40	170	260	50	45	462	290	40	789	255
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0			2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green		2.0			2.0		2.0	2.0		2.0	2.0	2.0
Arrival type		5			5		5	5		5	5	5
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	85	0	0	0
Lane Width		12.0			12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0			0		0	0		0	0	0
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	3.0

Phasing	EW Perm	02	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 48.0	G =	G =	G =	G = 8.0	G = 50.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		421			506		47	702		42	831	268
Lane group cap.		454			498		112	779		112	817	1288
v/c ratio		0.93			1.02		0.42	0.90		0.38	1.02	0.21
Green ratio		0.40			0.40		0.07	0.42		0.07	0.42	0.86
Unif. delay d1		34.3			36.0		53.8	32.7		53.6	35.0	1.5
Delay factor k		0.44			0.50		0.11	0.42		0.11	0.50	0.11
Increm. delay d2		25.3			44.4		2.5	13.6		2.1	35.8	0.1
PF factor		0.556			0.556		0.952	0.524		0.952	0.524	0.353
Control delay		44.4			64.4		53.7	30.8		53.2	54.2	0.6
Lane group LOS		D			E		D	C		D	D	A
Apprch. delay	44.4			64.4			32.2			41.6		
Approach LOS	D			E			C			D		
Intersec. delay	43.6			Intersection LOS						D		

46-P
2010
NP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE RD./CALLE ACERVO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/15/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	0	1	0	1	1	0	1	1	1
Lane group		LTR			LTR		L	TR		L	T	R
Volume (vph)	50	20	20	140	65	65	40	707	90	60	445	405
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0			2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green		2.0			2.0		2.0	2.0		2.0	2.0	2.0
Arrival type		5			5		5	5		5	5	5
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	85	0	0	0
Lane Width		12.0			12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0			0		0	0		0	0	0
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	3.0

Phasing	EW Perm	02	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 45.0	G =	G =	G =	G = 10.0	G = 51.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		95			283		42	749		63	468	426
Lane group cap.		478			505		140	833		140	833	638
v/c ratio		0.20			0.56		0.30	0.90		0.45	0.56	0.67
Green ratio		0.38			0.38		0.08	0.43		0.08	0.43	0.43
Unif. delay d1		25.3			29.7		51.7	32.1		52.4	26.1	27.7
Delay factor k		0.11			0.16		0.11	0.42		0.11	0.16	0.24
Increm. delay d2		0.2			1.4		1.2	12.7		2.3	0.9	2.7
PF factor		0.600			0.600		0.939	0.507		0.939	0.507	0.507
Control delay		15.4			19.2		49.8	29.0		51.5	14.1	16.7
Lane group LOS		B			B		D	C		D	B	B
Apprch. delay	15.4			19.2			30.1			17.7		
Approach LOS	B			B			C			B		
Intersec. delay	22.4			Intersection LOS						C		

1-A 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE. RD./SAN MARCOS B
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	SAN MARCOS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	0	2	2	0	1	2	1
Lane group	L	T	R	L	TR		L	T		L	T	R
Volume (vph)	264	654	60	353	1342	69	125	861		78	270	463
% Heavy veh	2	2	2	2	2	2	2	2		2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5		5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0	0	0	0	0			0	0	200
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 16.0	G = 49.0	G =	G =	G = 10.0	G = 35.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	278	688	63	372	1486		132	906		82	284	277
Lane group cap.	401	1407	738	422	1397		250	1005		129	1005	404
v/c ratio	0.69	0.49	0.09	0.88	1.06		0.53	0.90		0.64	0.28	0.69
Green ratio	0.12	0.38	0.49	0.12	0.38		0.08	0.27		0.08	0.27	0.27
Unif. delay d1	54.6	30.9	17.5	56.1	40.5		57.7	45.8		58.2	37.6	42.6
Delay factor k	0.26	0.11	0.11	0.41	0.50		0.13	0.42		0.22	0.11	0.25
Increm. delay d2	5.1	0.3	0.1	19.1	43.0		2.1	11.1		9.9	0.2	4.8
PF factor	0.906	0.597	0.354	0.906	0.597		0.944	0.754		0.944	0.754	0.754
Control delay	54.6	18.7	6.2	69.9	67.2		56.6	45.7		64.9	28.5	36.9
Lane group LOS	D	B	A	E	E		E	D		E	C	D
Apprch. delay	27.7			67.7			47.1			36.8		
Approach LOS	C			E			D			D		
Intersec. delay	49.6			Intersection LOS						D		

HCS2000: Signalized Intersections Release 4.1f

1-A
2010
WP

Urban Systems Inc.
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San Diego Ca 92123

Phone: 858-560-4911 Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst:	USAI
Agency/Co.:	USAI
Date Performed:	09/10/08
Analysis Time Period:	AM PEAK HOUR
Intersection:	RHO. STA. FE. RD./SAN MARCOS B
Area Type:	All other areas
Jurisdiction:	SAN MARCOS
Analysis Year:	YEAR 2010 WITH PROJECT
Project ID: LA COSTA	
E/W St: SAN MARCOS DR.	N/S St: RANCHO SANTA FE RD.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	264	654	60	353	1342	69	125	861		78	270	463
% Heavy Veh	2	2	2	2	2	2	2	2		2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95
PK 15 Vol	69	172	16	93	353	18	33	227		21	71	122
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000	1800	1800	2000		1800	2000		1800	2000	1800
ParkExist												
NumPark												
No. Lanes	2	2	1	2	2	0	2	2	0	1	2	1
LGConfig	L	T	R	L	TR		L	T		L	T	R
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
RTOR Vol			0			0						200
Adj Flow	278	688	63	372	1486		132	906		82	284	277
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.000	1.000		0.049			0.000			0.000	1.000
Peds Bikes	0			0		0	0			0		0
Buses	0	0	0	0	0		0	0		0	0	0
%InProtPhase												

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Arriv. Type	5	5	5	5	5		5	5		5	5	5
Unit Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext of g	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ped Min g		3.2			3.2			3.2			3.2	

1-P 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE. RD./SAN MARCOS B
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	SAN MARCOS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	0	2	2	0	1	2	1
Lane group	L	T	R	L	TR		L	T		L	T	R
Volume (vph)	301	1339	183	854	649	131	135	427		145	1019	328
% Heavy veh	2	2	2	2	2	2	2	2		2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5		5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0			0	0	200
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 5.0	G = 25.0	G = 40.0	G =	G = 10.0	G = 35.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	317	1409	193	899	821		142	449		153	1073	135
Lane group cap.	116	1067	589	857	1820		233	933		120	933	375
v/c ratio	2.73	1.32	0.33	1.05	0.45		0.61	0.48		1.27	1.15	0.36
Green ratio	0.04	0.29	0.39	0.25	0.50		0.07	0.25		0.07	0.25	0.25
Unif. delay d1	67.5	50.0	29.6	52.5	22.6		63.1	44.8		65.0	52.5	43.3
Delay factor k	0.50	0.50	0.11	0.50	0.11		0.20	0.11		0.50	0.50	0.11
Increm. delay d2	803.5	150.9	0.3	44.4	0.2		4.6	0.4		173.4	80.0	0.6
PF factor	0.975	0.733	0.569	0.778	0.333		0.949	0.778		0.949	0.778	0.778
Control delay	869.3	187.5	17.2	85.2	7.7		64.5	35.2		235.1	120.8	34.2
Lane group LOS	F	F	B	F	A		E	D		F	F	C
Apprch. delay	283.0			48.2			42.2			125.1		
Approach LOS	F			D			D			F		
Intersec. delay	146.9			Intersection LOS						F		

HCS2000: Signalized Intersections Release 4.1f

LP
2010
WP

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OPERATIONAL ANALYSIS

Analyst:	USAI
Agency/Co.:	USAI
Date Performed:	09/10/08
Analysis Time Period:	PM PEAK HOUR
Intersection:	RHO. STA. FE. RD./SAN MARCOS B
Area Type:	All other areas
Jurisdiction:	SAN MARCOS
Analysis Year:	YEAR 2010 WITH PROJECT

Project ID: LA COSTA
E/W St: SAN MARCOS DR. N/S St: RANCHO SANTA FE RD.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	301	1339	183	854	649	131	135	427		145	1019	328
% Heavy Veh	2	2	2	2	2	2	2	2		2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95
PK 15 Vol	79	352	48	225	171	34	36	112		38	268	86
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000	1800	1800	2000		1800	2000		1800	2000	1800
ParkExist												
NumPark												
No. Lanes	2	2	1	2	2	0	2	2	0	1	2	1
LGConfig	L	T	R	L	TR		L	T		L	T	R
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
RTOR Vol			0			0						200
Adj Flow	317	1409	193	899	821		142	449		153	1073	135
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.000	1.000		0.168			0.000			0.000	1.000
Peds Bikes	0		0	0		0	0			0		0
Buses	0	0	0	0	0		0	0		0	0	0
%InProtPhase			0.0									

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Arriv. Type	5	5	5	5	5		5	5		5	5	5
Unit Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext of g	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ped Min g		3.2			3.2			3.2			3.2	

2-A 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./LAKE SAN MARC
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	SAN MARCOS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	1	0	1	0	2	0	1	2	0
Lane group				L		R		TR		L	T	
Volume (vph)				186		141		1751	75	125	625	
% Heavy veh				2		2		2	2	2	2	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				4		5		4		4	4	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0			0		0	0	0	0			
Lane Width				10.0		14.0		15.0		10.0	15.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 18.0	G =	G =	G =	G = 20.0	G = 53.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 105.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				196		148		1922		132	658	
Lane group cap.				268		274		2060		298	3051	
v/c ratio				0.73		0.54		0.93		0.44	0.22	
Green ratio				0.17		0.17		0.50		0.19	0.74	
Unif. delay d1				41.2		39.7		24.3		37.6	4.1	
Delay factor k				0.29		0.14		0.45		0.11	0.11	
Increm. delay d2				9.8		2.2		8.5		1.1	0.0	
PF factor				1.000		0.862		0.759		1.000	0.224	
Control delay				51.0		36.4		27.0		38.6	1.0	
Lane group LOS				D		D		C		D	A	
Apprch. delay				44.7			27.0			7.3		
Approach LOS				D			C			A		
Intersec. delay	23.9			Intersection LOS						C		

2-P
2010
WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./LAKE SAN MARC
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	SAN MARCOS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	1	0	1	0	2	0	1	2	0
Lane group				L		R		TR		L	T	
Volume (vph)				113		135		892	155	265	1897	
% Heavy veh				2		2		2	2	2	2	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				4		5		4		4	4	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0			0		0	0	0	0			
Lane Width				10.0		14.0		15.0		10.0	15.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 18.0	G =	G =	G =	G = 20.0	G = 53.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 105.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				119		142		1102		279	1997	
Lane group cap.				268		274		2027		298	3051	
v/c ratio				0.44		0.52		0.54		0.94	0.65	
Green ratio				0.17		0.17		0.50		0.19	0.74	
Unif. delay d1				39.0		39.6		17.7		41.9	6.8	
Delay factor k				0.11		0.12		0.14		0.45	0.23	
Increm. delay d2				1.2		1.7		0.3		35.6	0.5	
PF factor				1.000		0.862		0.759		1.000	0.224	
Control delay				40.2		35.8		13.8		77.5	2.0	
Lane group LOS				D		D		B		E	A	
Apprch. delay				37.8			13.8			11.3		
Approach LOS				D			B			B		
Intersec. delay	13.9			Intersection LOS						B		

3-A

2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./CAM DEL ARROY
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	SAN MARCOS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Lane group		LTR			LTR		L	TR		L	TR	
Volume (vph)	30	8	61	101	2	95	19	1665	42	93	549	15
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0			2.0		2.0	2.0		2.0	2.0	
Ext. eff. green		2.0			2.0		2.0	2.0		2.0	2.0	
Arrival type		4			4		4	4		4	4	
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	50	0	0	0	0	0	0
Lane Width		12.0			12.0		10.0	15.0		10.0	15.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0			0		0	0		0	0	
Unit Extension		3.0			3.0		3.0	3.0		3,0	3.0	

Phasing	EW Perm	02	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 20.0	G =	G =	G =	G = 20.0	G = 56.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 110.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		104			155		20	1797		98	594	
Lane group cap.		262			216		285	2083		285	2082	
v/c ratio		0.40			0.72		0.07	0.86		0.34	0.29	
Green ratio		0.18			0.18		0.18	0.51		0.18	0.51	
Unif. delay d1		39.7			42.3		37.3	23.6		39.3	15.5	
Delay factor k		0.11			0.28		0.11	0.39		0.11	0.11	
Increm. delay d2		1.0			10.9		0.1	4.0		0.7	0.1	
PF factor		1.000			1.000		1.000	0.752		1.000	0.752	
Control delay		40.7			53.3		37.4	21.8		40.0	11.7	
Lane group LOS		D			D		D	C		D	B	
Apprch. delay	40.7			53.3			22.0			15.7		
Approach LOS	D			D			C			B		
Intersec. delay	22.9			Intersection LOS			C					

3-P
2010
WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./CAM DEL ARROY
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	SAN MARCOS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Lane group		LTR			LTR		L	TR		L	TR	
Volume (vph)	35	7	13	81	16	205	34	706	49	189	1720	25
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0			2.0		2.0	2.0		2.0	2.0	
Ext. eff. green		2.0			2.0		2.0	2.0		2.0	2.0	
Arrival type		4			4		4	4		4	4	
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	100	0	0	0	0	0	0
Lane Width		12.0			12.0		10.0	15.0		10.0	15.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0			0		0	0		0	0	
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	

Phasing	EW Perm	02	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 20.0	G =	G =	G =	G = 20.0	G = 56.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 110.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB	WB	NB	SB
Adj. flow rate	58	213	36 795	199 1837
Lane group cap.	220	256	285 2070	285 2086
v/c ratio	0.26	0.83	0.13 0.38	0.70 0.88
Green ratio	0.18	0.18	0.18 0.51	0.18 0.51
Unif. delay d1	38.7	43.4	37.7 16.5	42.2 24.0
Delay factor k	0.11	0.37	0.11 0.11	0.26 0.41
Increm. delay d2	0.6	20.3	0.2 0.1	7.3 4.8
PF factor	1.000	1.000	1.000 0.752	1.000 0.752
Control delay	39.3	63.6	37.9 12.5	49.5 22.8
Lane group LOS	D	E	D B	D C
Apprch. delay	39.3	63.6	13.6	25.4
Approach LOS	D	E	B	C
Intersec. delay	25.2	Intersection LOS		C

4-A

2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./ISLAND DR.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	SAN MARCOS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	0	1	0	0	0	1	2	0	0	2	0
Lane group	L		R				L	T			TR	
Volume (vph)	30		60				25	1146			1558	40
% Heavy veh	2		2				2	2			2	2
PHF	0.95		0.95				0.95	0.95			0.95	0.95
Actuated (P/A)	A	A	A				A	A			A	A
Startup lost time	2.0		2.0				2.0	2.0			2.0	
Ext. eff. green	2.0		2.0				2.0	2.0			2.0	
Arrival type	5		5				5	5			5	
Unit Extension	3.0		3.0				3.0	3.0			3.0	
Ped/Bike/RTOR Volume	0	0	25	0						0	0	0
Lane Width	10.0		10.0				10.0	15.0			15.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0		0				0	0			0	
Unit Extension	3.0		3.0				3.0	3.0			3.0	

Phasing	EB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 8.0	G =	G =	G =	G = 19.0	G = 60.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 100.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	32		37				26	1206			1682	
Lane group cap.	125		112				297	3409			2455	
v/c ratio	0.26		0.33				0.09	0.35			0.69	
Green ratio	0.08		0.08				0.19	0.83			0.60	
Unif. delay d1	43.2		43.5				33.4	2.0			13.6	
Delay factor k	0.11		0.11				0.11	0.11			0.25	
Increm. delay d2	1.1		1.7				0.1	0.1			0.8	
PF factor	0.942		0.942				0.844	0.294			0.125	
Control delay	41.8		42.7				28.3	0.7			2.5	
Lane group LOS	D		D				C	A			A	
Apprch. delay	42.3						1.2			2.5		
Approach LOS	D						A			A		
Intersec. delay	2.9			Intersection LOS						A		

4-P

2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./ISLAND DR.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	SAN MARCOS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	0	1	0	0	0	1	2	0	0	2	0
Lane group	L		R				L	T			TR	
Volume (vph)	58		35				30	1561			1048	50
% Heavy veh	2		2				2	2			2	2
PHF	0.95		0.95				0.95	0.95			0.95	0.95
Actuated (P/A)	A	A	A				A	A			A	A
Startup lost time	2.0		2.0				2.0	2.0			2.0	
Ext. eff. green	2.0		2.0				2.0	2.0			2.0	
Arrival type	5		5				5	5			5	
Unit Extension	3.0		3.0				3.0	3.0			3.0	
Ped/Bike/RTOR Volume	0	0	25	0						0	0	0
Lane Width	10.0		10.0				10.0	15.0			15.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0		0				0	0			0	
Unit Extension	3.0		3.0				3.0	3.0			3.0	

Phasing	EB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 8.0	G =	G =	G =	G = 19.0	G = 60.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 100.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	61		11				32	1643			1156	
Lane group cap.	125		112				297	3409			2447	
v/c ratio	0.49		0.10				0.11	0.48			0.47	
Green ratio	0.08		0.08				0.19	0.83			0.60	
Unif. delay d1	44.0		42.7				33.5	2.4			11.2	
Delay factor k	0.11		0.11				0.11	0.11			0.11	
Increm. delay d2	3.0		0.4				0.2	0.1			0.1	
PF factor	0.942		0.942				0.844	0.294			0.125	
Control delay	44.5		40.6				28.4	0.8			1.5	
Lane group LOS	D		D				C	A			A	
Apprch. delay	43.9						1.3			1.5		
Approach LOS	D						A			A		
Intersec. delay	2.5			Intersection LOS						A		

5-A 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ PALOMAR AIRPOR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	CARLSBAD
Time Period	2010 AM PEAK	Analysis Year	YEAR 2010 WITH PROJ.

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	4	1	2	3	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	746	925	141	250	1540	232	548	1511	405	113	352	814
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	310
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 33.2	G = 39.3	G = 0.0	G =	G = 7.4	G = 13.9	G = 21.2	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	785	974	148	263	1621	244	577	1591	426	119	371	531
Lane group cap.	772	1499	752	772	1569	551	612	2040	831	172	809	630
v/c ratio	1.02	0.65	0.20	0.34	1.03	0.44	0.94	0.78	0.51	0.69	0.46	0.84
Green ratio	0.24	0.28	0.50	0.24	0.28	0.37	0.19	0.29	0.56	0.05	0.15	0.42
Unif. delay d1	53.4	44.3	19.1	44.3	50.4	33.3	56.1	45.9	19.1	65.2	54.2	36.1
Delay factor k	0.50	0.23	0.11	0.11	0.50	0.11	0.46	0.33	0.12	0.26	0.11	0.38
Increm. delay d2	36.7	1.0	0.1	0.3	31.7	0.6	23.2	2.0	0.5	11.3	0.4	10.1
PF factor	0.793	0.740	0.322	0.793	0.740	0.610	0.846	0.732	0.154	0.963	0.881	0.509
Control delay	79.0	33.8	6.3	35.4	69.0	20.9	70.7	35.6	3.5	74.0	48.1	28.5
Lane group LOS	E	C	A	D	E	C	E	D	A	E	D	C
Apprch. delay	50.3			59.3			38.1			40.9		
Approach LOS	D			E			D			D		
Intersec. delay	47.4			Intersection LOS						D		

5-P 200 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ PALOMAR AIRPOR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	950	1345	323	398	1129	75	132	508	225	114	1233	815
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	345
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	EB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 7.0	G = 33.0	G =	G = 12.0	G = 33.0	G =	G =
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	1000	1416	340	419	1188	79	139	535	237	120	1298	495
Lane group cap.	977	1717	482	698	1259	536	279	1259	729	279	1259	857
v/c ratio	1.02	0.82	0.71	0.60	0.94	0.15	0.50	0.42	0.33	0.43	1.03	0.58
Green ratio	0.30	0.32	0.32	0.21	0.24	0.36	0.09	0.24	0.49	0.09	0.24	0.57
Unif. delay d1	49.0	43.9	41.7	49.6	52.6	30.5	61.1	45.4	22.0	60.8	53.5	19.2
Delay factor k	0.50	0.36	0.27	0.19	0.46	0.11	0.11	0.11	0.11	0.11	0.50	0.17
Increm. delay d2	34.9	3.4	4.7	1.4	14.0	0.1	1.4	0.2	0.3	1.1	33.7	1.0
PF factor	0.714	0.684	0.684	0.818	0.794	0.630	0.938	0.794	0.370	0.938	0.794	0.117
Control delay	69.9	33.4	33.2	42.0	55.8	19.4	58.7	36.3	8.4	58.0	76.2	3.2
Lane group LOS	E	C	C	D	E	B	E	D	A	E	E	A
Apprch. delay	46.6			50.7			32.5			56.1		
Approach LOS	D			D			C			E		
Intersec. delay	48.3			Intersection LOS						D		

6-A 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ RANCHO BRAVADO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	3	0	1	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	34	7	6	136	2	90	3	2340	60	17	721	5
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 15.0	G =	G =	G = 13.0	G = 67.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	36	13		143	97		3	2526		18	764	
Lane group cap.	193	209		193	181		168	2742		168	2749	
v/c ratio	0.19	0.06		0.74	0.54		0.02	0.92		0.11	0.28	
Green ratio	0.12	0.12		0.12	0.12		0.10	0.52		0.10	0.52	
Unif. delay d1	52.0	51.2		55.6	54.2		52.7	29.1		53.2	17.8	
Delay factor k	0.11	0.11		0.30	0.14		0.11	0.44		0.11	0.11	
Increm. delay d2	0.5	0.1		14.2	3.1		0.0	5.8		0.3	0.1	
PF factor	0.913	0.913		0.913	0.913		0.926	0.291		0.926	0.291	
Control delay	47.9	46.9		65.0	52.6		48.9	14.2		49.6	5.2	
Lane group LOS	D	D		E	D		D	B		D	A	
Apprch. delay	47.7			60.0			14.3			6.3		
Approach LOS	D			E			B			A		
Intersec. delay	16.0			Intersection LOS						B		

6-P 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ RANCHO BRAVADO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	3	0	1	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	6	4	4	53	1	46	16	813	126	78	1864	12
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 20.0	G =	G =	G = 13.0	G = 62.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	6	8		56	49		17	989		82	1975	
Lane group cap.	193	278		193	242		168	2494		168	2544	
v/c ratio	0.03	0.03		0.29	0.20		0.10	0.40		0.49	0.78	
Green ratio	0.12	0.15		0.12	0.15		0.10	0.48		0.10	0.48	
Unif. delay d1	51.0	46.7		52.6	48.0		53.2	21.9		55.4	28.2	
Delay factor k	0.11	0.11		0.11	0.11		0.11	0.11		0.11	0.33	
Increm. delay d2	0.1	0.0		0.8	0.4		0.3	0.1		2.2	1.6	
PF factor	0.913	0.879		0.913	0.879		0.926	0.392		0.926	0.392	
Control delay	46.7	41.1		48.9	42.6		49.5	8.7		53.5	12.6	
Lane group LOS	D	D		D	D		D	A		D	B	
Apprch. delay	43.5			46.0			9.4			14.3		
Approach LOS	D			D			A			B		
Intersec. delay	13.9			Intersection LOS						B		

7-A 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ POINSETTIA LANE
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	1	1	1	1	0	2	3	0	1	3	1
Lane group	L	T	R	L	TR		L	TR		L	T	R
Volume (vph)	535	8	27	30	26	53	47	1815	15	20	672	171
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5		5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 14.0	G =	G =	G = 10.0	G = 56.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	563	8	28	32	83		49	1927		21	707	180
Lane group cap.	751	211	1024	387	179		250	2298		129	2300	1046
v/c ratio	0.75	0.04	0.03	0.08	0.46		0.20	0.84		0.16	0.31	0.17
Green ratio	0.23	0.11	0.69	0.23	0.11		0.08	0.43		0.08	0.43	0.70
Unif. delay d1	46.5	52.0	6.3	39.2	54.5		56.2	33.0		56.1	24.3	6.7
Delay factor k	0.30	0.11	0.11	0.11	0.11		0.11	0.37		0.11	0.11	0.11
Increm. delay d2	4.2	0.1	0.0	0.1	1.9		0.4	2.9		0.6	0.1	0.1
PF factor	0.800	0.920	0.163	0.800	0.920		0.944	0.495		0.944	0.495	0.167
Control delay	41.4	47.9	1.0	31.5	52.0		53.5	19.3		53.6	12.1	1.2
Lane group LOS	D	D	A	C	D		D	B		D	B	A
Apprch. delay	39.6			46.3			20.1			10.9		
Approach LOS	D			D			C			B		
Intersec. delay	21.9			Intersection LOS						C		

7-P 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ POINSETTIA LANE
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	1	1	1	1	0	2	3	0	1	3	1
Lane group	L	T	R	L	TR		L	TR		L	T	R
Volume (vph)	434	37	85	27	11	23	74	498	29	138	1260	523
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5		5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 14.0	G =	G =	G = 15.0	G = 51.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 130.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	457	39	89	28	36		78	555		145	1326	551
Lane group cap.	751	211	1024	387	179		376	2077		193	2095	989
v/c ratio	0.61	0.18	0.09	0.07	0.20		0.21	0.27		0.75	0.63	0.56
Green ratio	0.23	0.11	0.69	0.23	0.11		0.12	0.39		0.12	0.39	0.66
Unif. delay d1	44.7	52.8	6.5	39.1	52.9		52.1	26.8		55.7	31.9	11.8
Delay factor k	0.19	0.11	0.11	0.11	0.11		0.11	0.11		0.31	0.21	0.15
Increm. delay d2	1.4	0.4	0.0	0.1	0.6		0.3	0.1		15.2	0.6	0.7
PF factor	0.800	0.920	0.163	0.800	0.920		0.913	0.570		0.913	0.570	0.148
Control delay	37.2	49.0	1.1	31.4	49.2		47.9	15.3		66.0	18.8	2.4
Lane group LOS	D	D	A	C	D		D	B		E	B	A
Apprch. delay	32.5			41.4			19.4			17.7		
Approach LOS	C			D			B			B		
Intersec. delay	21.1			Intersection LOS						C		

8-A 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ CARRILLO WAY
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	CARLSBAD
Time Period	2010 AM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	3	0	1	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	130	15	56	37	50	12	117	1733	16	5	704	15
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 17.0	G = 18.0	G =	G =	G = 14.0	G = 61.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	137	75		39	66		123	1841		5	757	
Lane group cap.	219	237		219	250		180	2503		180	2497	
v/c ratio	0.63	0.32		0.18	0.26		0.68	0.74		0.03	0.30	
Green ratio	0.13	0.14		0.13	0.14		0.11	0.47		0.11	0.47	
Unif. delay d1	53.5	50.5		50.3	50.1		55.9	28.0		51.9	21.3	
Delay factor k	0.21	0.11		0.11	0.11		0.25	0.29		0.11	0.11	
Increm. delay d2	5.5	0.8		0.4	0.6		10.2	1.2		0.1	0.1	
PF factor	0.900	0.893		0.900	0.893		0.920	0.411		0.920	0.411	
Control delay	53.7	45.8		45.6	45.3		61.6	12.6		47.8	8.8	
Lane group LOS	D	D		D	D		E	B		D	A	
Apprch. delay	50.9			45.4			15.7			9.1		
Approach LOS	D			D			B			A		
Intersec. delay	17.5			Intersection LOS						B		

8-P
2010
WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ CARRILLO WAY
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	CARLSBAD
Time Period	2010 PM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	3	0	1	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	145	35	75	38	10	9	60	403	360	54	1199	51
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 17.0	G = 18.0	G =	G =	G = 14.0	G = 61.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	153	116		40	20		63	803		57	1316	
Lane group cap.	219	242		219	239		180	2323		180	2489	
v/c ratio	0.70	0.48		0.18	0.08		0.35	0.35		0.32	0.53	
Green ratio	0.13	0.14		0.13	0.14		0.11	0.47		0.11	0.47	
Unif. delay d1	54.0	51.7		50.3	48.8		53.8	21.9		53.6	24.4	
Delay factor k	0.26	0.11		0.11	0.11		0.11	0.11		0.11	0.13	
Increm. delay d2	9.4	1.5		0.4	0.2		1.2	0.1		1.0	0.2	
PF factor	0.900	0.893		0.900	0.893		0.920	0.411		0.920	0.411	
Control delay	58.1	47.6		45.7	43.7		50.6	9.1		50.3	10.2	
Lane group LOS	E	D		D	D		D	A		D	B	
Apprch. delay	53.6			45.0			12.1			11.9		
Approach LOS	D			D			B			B		
Intersec. delay	17.1			Intersection LOS						B		

9-A 2010 AM

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ ALGA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	1	0	2	3	0	1	3	0
Lane group	L	TR	R	L	TR		L	TR		L	TR	
Volume (vph)	520	5	706	18	18	30	323	1316	3	2	685	110
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5		0	5	0	0	5	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	EW Perm	02	03	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 55.0	G =	G =	G =	G = 5.0	G = 20.0	G = 30.0	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	547	295	453	19	51		340	1388		2	837	
Lane group cap.	539	705	748	403	714		751	2259		64	1205	
v/c ratio	1.01	0.42	0.61	0.05	0.07		0.45	0.61		0.03	0.69	
Green ratio	0.42	0.42	0.50	0.42	0.42		0.23	0.42		0.04	0.23	
Unif. delay d1	37.5	26.3	23.3	22.1	22.3		42.9	29.2		60.2	45.8	
Delay factor k	0.50	0.11	0.19	0.11	0.11		0.11	0.20		0.11	0.26	
Increm. delay d2	42.5	0.4	1.4	0.0	0.0		0.4	0.5		0.2	1.8	
PF factor	0.511	0.511	0.333	0.511	0.511		0.800	0.511		0.973	0.800	
Control delay	61.7	13.8	9.2	11.3	11.4		34.8	15.4		58.8	38.4	
Lane group LOS	E	B	A	B	B		C	B		E	D	
Apprch. delay	32.4			11.4			19.3			38.4		
Approach LOS	C			B			B			D		
Intersec. delay	27.5			Intersection LOS						C		

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9-A
200
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OPERATIONAL ANALYSIS

Analyst:	USAI
Agency/Co.:	USAI
Date Performed:	09/10/08
Analysis Time Period:	AM PEAK
Intersection:	MELROSE DR.@ ALGA RD.
Area Type:	All other areas
Jurisdiction:	CARLSBAD
Analysis Year:	YEAR 2010 WITH PROJECT

Project ID: LA COSTA TOWN CENTER
E/W St: ALGA ROAD N/S St: MELROSE DRIVE

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	520	5	706	18	18	30	323	1316	3	2	685	110
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	137	2	186	5	5	8	85	346	1	1	180	29
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000	1800	1800	2000		1800	2000		1800	2000	
ParkExist												
NumPark												
No. Lanes	1	1	1	1	1	0	2	3	0	1	3	0
LGConfig	L	TR	R	L	TR		L	TR		L	TR	
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			0			0			0			0
Adj Flow	547	295	453	19	51		340	1388		2	837	
%InSharedLn			39									
Prop LTs	1.000	0.000		1.000	0.000			0.000			0.000	
Prop RTs		0.982	1.000		0.627			0.002			0.139	
Peds Bikes	5		0	5			5		0	5		0
Buses	0	0	0	0	0		0	0		0	0	
%InProtPhase			0.0									

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Arriv. Type	5	5	5	5	5		5	5		5	5	
Unit Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext of g	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ped Min g		33.2			33.2			33.2			33.2	

7-P 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ ALGA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/10/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	1	0	2	3	0	1	3	0
Lane group	L	TR	R	L	TR		L	TR		L	TR	
Volume (vph)	200	20	545	15	10	5	729	614	20	42	868	402
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5		0	5	0	0	5		0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	EW Perm	02	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 22.0	G =	G =	G =	G = 29.0	G = 54.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	211	21	574	16	16		767	667		44	1337	
Lane group cap.	241	360	694	239	325		787	2392		405	2289	
v/c ratio	0.88	0.06	0.83	0.07	0.05		0.97	0.28		0.11	0.58	
Green ratio	0.18	0.18	0.47	0.18	0.18		0.24	0.45		0.24	0.45	
Unif. delay d1	47.7	40.4	27.8	40.5	40.4		45.1	20.8		35.4	24.6	
Delay factor k	0.40	0.11	0.37	0.11	0.11		0.48	0.11		0.11	0.18	
Increm. delay d2	28.2	0.1	8.2	0.1	0.1		25.8	0.1		0.1	0.4	
PF factor	0.850	0.850	0.417	0.850	0.850		0.788	0.455		0.788	0.455	
Control delay	68.7	34.5	19.8	34.6	34.4		61.4	9.5		28.0	11.6	
Lane group LOS	E	C	B	C	C		E	A		C	B	
Apprch. delay	33.0			34.5			37.3			12.1		
Approach LOS	C			C			D			B		
Intersec. delay	26.8			Intersection LOS						C		

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9-P
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OPERATIONAL ANALYSIS

Analyst:	USAI
Agency/Co.:	USAI
Date Performed:	09/10/08
Analysis Time Period:	PM PEAK
Intersection:	MELROSE DR.@ ALGA RD.
Area Type:	All other areas
Jurisdiction:	CARLSBAD
Analysis Year:	YEAR 2010 WITH PROJECT

Project ID: LA COSTA TOWN CENTER
E/W St: ALGA ROAD N/S St: MELROSE DRIVE

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	200	20	545	15	10	5	729	614	20	42	868	402
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	53	5	143	4	3	2	192	162	5	11	228	106
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000	1800	1800	2000		1800	2000		1800	2000	
ParkExist												
NumPark												
No. Lanes	1	1	1	1	1	0	2	3	0	1	3	0
LGConfig	L		TR	R	L		TR		L		TR	
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			0			0			0			0
Adj Flow	211	21	574	16	16		767	667		44	1337	
%InSharedLn			0									
Prop LTs	1.000	0.000		1.000	0.000			0.000			0.000	
Prop RTs		0.000	1.000		0.313			0.031			0.316	
Peds Bikes	5		0	5			5		0	5		
Buses	0	0	0	0	0		0	0		0	0	
%InProtPhase			0.0									

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Arriv. Type	5	5	5	5	5		5	5		5	5	
Unit Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext of g	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ped Min g		33.2			33.2			33.2			33.2	

10-A 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@RANCHO SANTA FE DR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	2	2	2	0	2	3	0	2	3	2
Lane group	L	T	R	L	TR		L	TR		L	T	R
Volume (vph)	667	302	441	68	467	105	920	982	25	200	602	255
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5		5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 32.0	G = 25.0	G =	G =	G = 12.0	G = 24.0	G = 22.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	702	318	464	72	603		968	1060		211	634	268
Lane group cap.	744	667	1346	744	646		954	1938		279	839	1102
v/c ratio	0.94	0.48	0.34	0.10	0.93		1.01	0.55		0.76	0.76	0.24
Green ratio	0.23	0.18	0.51	0.23	0.18		0.29	0.36		0.09	0.16	0.42
Unif. delay d1	53.1	51.6	20.6	42.6	56.7		49.5	35.3		62.6	56.4	26.1
Delay factor k	0.46	0.11	0.11	0.11	0.45		0.50	0.15		0.31	0.31	0.11
Increm. delay d2	20.4	0.5	0.2	0.1	20.7		32.8	0.3		11.3	4.0	0.1
PF factor	0.802	0.855	0.314	0.802	0.855		0.724	0.618		0.938	0.876	0.514
Control delay	63.1	44.7	6.6	34.2	69.2		68.7	22.2		69.9	53.4	13.5
Lane group LOS	E	D	A	C	E		E	C		E	D	B
Apprch. delay	41.5			65.4			44.4			46.9		
Approach LOS	D			E			D			D		
Intersec. delay	46.8			Intersection LOS						D		

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OPERATIONAL ANALYSIS

Analyst:	USAI
Agency/Co.:	USAI
Date Performed:	09/11/08
Analysis Time Period:	AM PEAK
Intersection:	MELROSE DR.@RANCHO SANTA FE DR
Area Type:	All other areas
Jurisdiction:	CARLSBAD
Analysis Year:	YEAR 2010 WITH PROJECT

Project ID: LA COSTA TOWN CENTER
E/W St: MELROSE DR. N/S St: RANCHO SANTA FE DR.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	667	302	441	68	467	105	920	982	25	200	602	255
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	176	79	116	18	123	28	242	258	7	53	158	67
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000	1800	1800	2000		1800	2000		1800	2000	1800
ParkExist												
NumPark												
No. Lanes	2	2	2	2	2	0	2	3	0	2	3	2
LGConfig	L	T	R	L	TR		L	TR		L	T	R
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
RTOR Vol			0			0			0			0
Adj Flow	702	318	464	72	603		968	1060		211	634	268
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.000	1.000		0.184			0.025			0.000	1.000
Peds Bikes	5			5		0	5		0	5		0
Buses	0	0	0	0	0		0	0		0	0	0
%InProtPhase						0.0						0.0

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Arriv. Type	5	5	5	5	5		5	5		5	5	5
Unit Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext of g	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ped Min g		33.3			33.3			33.3			33.3	

10-P 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@RANCHO SANTA FE DR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	2	2	2	0	2	3	0	2	3	2
Lane group	L	T	R	L	TR		L	TR		L	T	R
Volume (vph)	320	375	733	28	290	135	379	966	24	150	890	694
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5		5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 34.0	G = 23.0	G =	G =	G = 11.0	G = 22.0	G = 25.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	337	395	772	29	447		399	1042		158	937	731
Lane group cap.	791	613	1252	791	581		884	1976		256	953	1197
v/c ratio	0.43	0.64	0.62	0.04	0.77		0.45	0.53		0.62	0.98	0.61
Green ratio	0.24	0.16	0.47	0.24	0.16		0.27	0.37		0.08	0.18	0.46
Unif. delay d1	44.8	54.7	27.6	40.5	56.0		42.3	34.4		62.5	57.3	28.6
Delay factor k	0.11	0.22	0.20	0.11	0.32		0.11	0.13		0.20	0.49	0.20
Increm. delay d2	0.4	2.3	0.9	0.0	6.2		0.4	0.3		4.5	25.0	0.9
PF factor	0.786	0.869	0.405	0.786	0.869		0.752	0.606		0.943	0.855	0.439
Control delay	35.6	49.8	12.1	31.9	54.9		32.2	21.1		63.4	74.0	13.5
Lane group LOS	D	D	B	C	D		C	C		E	E	B
Apprch. delay	27.3			53.5			24.2			48.8		
Approach LOS	C			D			C			D		
Intersec. delay	36.3			Intersection LOS						D		

HCS2000: Signalized Intersections Release 4.1f

10-P
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OPERATIONAL ANALYSIS

Analyst:	USAI
Agency/Co.:	USAI
Date Performed:	09/11/08
Analysis Time Period:	PM PEAK
Intersection:	MELROSE DR.@RANCHO SANTA FE DR
Area Type:	All other areas
Jurisdiction:	CARLSBAD
Analysis Year:	YEAR 2010 WITH PROJECT

Project ID: LA COSTA TOWN CENTER
E/W St: MELROSE DR. N/S St: RANCHO SANTA FE DR.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	320	375	733	28	290	135	379	966	24	150	890	694
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	84	99	193	7	76	36	100	254	6	39	234	183
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000	1800	1800	2000		1800	2000		1800	2000	1800
ParkExist												
NumPark												
No. Lanes	2	2	2	2	2	0	2	3	0	2	3	2
LGConfig	L	T	R	L	TR		L	TR		L	T	R
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
RTOR Vol			0			0			0			0
Adj Flow	337	395	772	29	447		399	1042		158	937	731
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.000	1.000		0.318			0.024			0.000	1.000
Peds Bikes	5			5		0	5		0	5		0
Buses	0	0	0	0	0		0	0		0	0	0
%InProtPhase						0.0						0.0

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Arriv. Type	5	5	5	5	5		5	5		5	5	5
Unit Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext of g	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ped Min g		33.3			33.3			33.3			33.3	

11-A 2010 wp

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SAN. FE@SAN ELIJO RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	2	1	1	1	3	1	2	3	1
Lane group	L	TR		L	T	R	L	T	R	L	T	R
Volume (vph)	80	33	122	648	54	327	64	1520	469	181	877	52
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		0	5	0	0	5	0	300	5	0	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 35.0	G = 30.0	G =	G =	G = 11.0	G = 44.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 140.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	84	163		682	57	344	67	1600	178	191	923	55
Lane group cap.	419	371		814	399	490	132	1679	896	256	1678	468
v/c ratio	0.20	0.44		0.84	0.14	0.70	0.51	0.95	0.20	0.75	0.55	0.12
Green ratio	0.25	0.21		0.25	0.21	0.33	0.08	0.31	0.60	0.08	0.31	0.31
Unif. delay d1	41.5	47.7		49.8	44.6	41.0	61.9	47.0	12.7	63.1	39.8	34.2
Delay factor k	0.11	0.11		0.37	0.11	0.27	0.12	0.46	0.11	0.30	0.15	0.11
Increm. delay d2	0.2	0.8		7.7	0.2	4.5	3.2	12.6	0.1	11.3	0.4	0.1
PF factor	0.778	0.818		0.778	0.818	0.674	0.943	0.694	0.125	0.943	0.694	0.694
Control delay	32.5	39.9		46.5	36.6	32.1	61.6	45.2	1.7	70.9	28.0	23.8
Lane group LOS	C	D		D	D	C	E	D	A	E	C	C
Apprch. delay	37.4			41.4			41.6			34.8		
Approach LOS	D			D			D			C		
Intersec. delay	39.5			Intersection LOS						D		

HCS2000: Signalized Intersections Release 4.1f

11-A
2010
WP

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OPERATIONAL ANALYSIS

Analyst:	USAI
Agency/Co.:	USAI
Date Performed:	09/11/08
Analysis Time Period:	AM PEAK
Intersection:	RANCHO SAN. FE@SAN ELIJO RD.
Area Type:	All other areas
Jurisdiction:	CARLSBAD
Analysis Year:	YEAR 2010 WITH PROJECT

Project ID: LA COSTA TOWN CENTER
E/W St: SAN ELIJO RD. N/S St: RANCHO SANTA FE DR.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	80	33	122	648	54	327	64	1520	469	181	877	52
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	21	9	32	171	14	86	17	400	123	48	231	14
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000		1800	2000	1800	1800	2000	1800	1800	2000	1800
ParkExist												
NumPark												
No. Lanes	1	1	0	2	1	1	1	3	1	2	3	1
LGConfig	L	TR		L	T	R	L	T	R	L	T	R
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol		0			0			300			0	
Adj Flow	84	163		682	57	344	67	1600	178	191	923	55
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.785			0.000	1.000		0.000	1.000		0.000	1.000
Peds Bikes	5			5	0		5	0		5	0	
Buses	0	0		0	0	0	0	0	0	0	0	0
%InProtPhase						0.0			0.0			

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arriv. Type	5	5		5	5	5	5	5	5	5	5	5
Unit Ext.	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext of g	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ped Min g		33.3			33.3			33.3			33.3	

11-P 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SAN. FE@SAN ELIJO RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	2	1	1	1	3	1	2	3	1
Lane group	L	TR		L	T	R	L	T	R	L	T	R
Volume (vph)	122	64	55	789	27	187	88	1061	584	179	1358	112
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		0	5	0	0	5	0	300	5	0	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 37.0	G = 25.0	G =	G =	G = 13.0	G = 45.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	128	125		831	28	197	93	1117	299	188	1429	118
Lane group cap.	443	326		861	333	457	156	1717	928	302	1716	479
v/c ratio	0.29	0.38		0.97	0.08	0.43	0.60	0.65	0.32	0.62	0.83	0.25
Green ratio	0.26	0.18		0.26	0.18	0.31	0.09	0.32	0.62	0.09	0.32	0.32
Unif. delay d1	41.0	50.7		50.9	48.0	38.7	61.0	40.8	12.5	61.1	44.0	35.0
Delay factor k	0.11	0.11		0.47	0.11	0.11	0.19	0.23	0.11	0.21	0.37	0.11
Increm. delay d2	0.4	0.8		22.5	0.1	0.7	6.1	0.9	0.2	3.9	3.7	0.3
PF factor	0.761	0.855		0.761	0.855	0.704	0.932	0.684	0.132	0.932	0.684	0.684
Control delay	31.6	44.1		61.2	41.1	27.9	62.9	28.8	1.9	60.9	33.8	24.2
Lane group LOS	C	D		E	D	C	E	C	A	E	C	C
Apprch. delay	37.8			54.4			25.5			36.1		
Approach LOS	D			D			C			D		
Intersec. delay	36.9			Intersection LOS						D		

HCS2000: Signalized Intersections Release 4.1f

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11-P
2010 WP

OPERATIONAL ANALYSIS

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/11/08
Analysis Time Period: PM PEAK
Intersection: RANCHO SAN. FE@SAN ELIJO RD.
Area Type: All other areas
Jurisdiction: CARLSBAD
Analysis Year: YEAR 2010 WITH PROJECT
Project ID: LA COSTA TOWN CENTER
E/W St: SAN ELIJO RD. N/S St: RANCHO SANTA FE DR.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	122	64	55	789	27	187	88	1061	584	179	1358	112
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	32	17	14	208	7	49	23	279	154	47	357	29
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000		1800	2000	1800	1800	2000	1800	1800	2000	1800
ParkExist												
NumPark												
No. Lanes	1	1	0	2	1	1	1	3	1	2	3	1
LGConfig	L	TR		L	T	R	L	T	R	L	T	R
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			0			300			0
Adj Flow	128	125		831	28	197	93	1117	299	188	1429	118
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.464			0.000	1.000		0.000	1.000		0.000	1.000
Peds Bikes	5			5		0	5		0	5		0
Buses	0	0		0	0	0	0	0	0	0	0	0
%InProtPhase						0.0			0.0			

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arriv. Type	5	5		5	5	5	5	5	5	5	5	5
Unit Ext.	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext of g	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ped Min g		33.3			33.3			33.3			33.3	

12-A
2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SAN. FE@CAM. JUNIPERO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	1	1	3	1	1	3	1
Lane group	L	TR		L	T	R	L	T	R	L	T	R
Volume (vph)	128	5	77	65	5	70	29	1854	51	24	1577	46
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		0	5	0	0	5		0	5	0	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 17.0	G = 13.0	G =	G =	G = 12.0	G = 68.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	135	86		68	5	74	31	1952	54	25	1660	48
Lane group cap.	219	168		219	186	341	155	2794	1038	155	2793	781
v/c ratio	0.62	0.51		0.31	0.03	0.22	0.20	0.70	0.05	0.16	0.59	0.06
Green ratio	0.13	0.10		0.13	0.10	0.23	0.09	0.52	0.69	0.09	0.52	0.52
Unif. delay d1	53.4	55.5		51.2	52.8	40.5	54.6	23.3	6.4	54.4	21.5	15.3
Delay factor k	0.20	0.12		0.11	0.11	0.11	0.11	0.26	0.11	0.11	0.18	0.11
Increm. delay d2	5.2	2.6		0.8	0.1	0.3	0.6	0.8	0.0	0.5	0.3	0.0
PF factor	0.900	0.926		0.900	0.926	0.800	0.932	0.269	0.163	0.932	0.269	0.269
Control delay	53.2	54.0		46.9	48.9	32.7	51.5	7.1	1.1	51.2	6.1	4.1
Lane group LOS	D	D		D	D	C	D	A	A	D	A	A
Apprch. delay	53.5			39.8			7.6			6.7		
Approach LOS	D			D			A			A		
Intersec. delay	10.8			Intersection LOS						B		

12-P 2010 wp

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SAN. FE@CAM. JUNIPERO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	1	1	3	1	1	3	1
Lane group	L	TR		L	T	R	L	T	R	L	T	R
Volume (vph)	82	8	70	72	16	100	70	1550	162	106	1954	142
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		30	5	0	0	5		0	5	0	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 17.0	G = 13.0	G =	G =	G = 15.0	G = 65.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	86	50		76	17	105	74	1632	171	112	2057	149
Lane group cap.	219	171		219	186	375	193	2671	1004	193	2670	747
v/c ratio	0.39	0.29		0.35	0.09	0.28	0.38	0.61	0.17	0.58	0.77	0.20
Green ratio	0.13	0.10		0.13	0.10	0.25	0.12	0.50	0.67	0.12	0.50	0.50
Unif. delay d1	51.8	54.2		51.4	53.1	39.0	53.2	23.4	8.0	54.5	26.4	18.1
Delay factor k	0.11	0.11		0.11	0.11	0.11	0.11	0.20	0.11	0.17	0.32	0.11
Increm. delay d2	1.2	1.0		1.0	0.2	0.4	1.3	0.4	0.1	4.4	1.4	0.1
PF factor	0.900	0.926		0.900	0.926	0.773	0.913	0.333	0.151	0.913	0.333	0.333
Control delay	47.7	51.2		47.2	49.4	30.5	49.9	8.2	1.3	54.1	10.2	6.1
Lane group LOS	D	D		D	D	C	D	A	A	D	B	A
Apprch. delay	49.0			38.6			9.2			12.1		
Approach LOS	D			D			A			B		
Intersec. delay	13.2			Intersection LOS						B		

13 - A
2010
WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SANTA FR DR./LA COSTA A
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	2010 AM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	2	3	0	2	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	340	275	156	105	308	79	82	1414	188	193	1232	246
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5	0	40	5	0	45	5	0	100
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	EB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 16.0	G = 18.0	G = 18.0	G =	G = 11.0	G = 42.0	G =	G =
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	358	453		111	365		86	1639		203	1451	
Lane group cap.	503	1109		206	506		276	1701		276	1697	
v/c ratio	0.71	0.41		0.54	0.72		0.31	0.96		0.74	0.86	
Green ratio	0.30	0.32		0.12	0.14		0.08	0.32		0.08	0.32	
Unif. delay d1	40.5	35.0		53.5	53.6		55.9	43.2		58.1	41.2	
Delay factor k	0.28	0.11		0.14	0.28		0.11	0.47		0.29	0.39	
Increm. delay d2	4.7	0.2		2.8	5.0		0.6	14.2		9.8	4.5	
PF factor	0.714	0.693		0.906	0.893		0.938	0.682		0.938	0.682	
Control delay	33.6	24.5		51.4	52.9		53.1	43.6		64.3	32.6	
Lane group LOS	C	C		D	D		D	D		E	C	
Apprch. delay	28.5			52.5			44.1			36.5		
Approach LOS	C			D			D			D		
Intersec. delay	39.6			Intersection LOS						D		

HCS2000: Signalized Intersections Release 4.1f

13-A
2010
WP

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OPERATIONAL ANALYSIS

Analyst:	USAI
Agency/Co.:	USAI
Date Performed:	09/11/08
Analysis Time Period:	2010 AM PEAK
Intersection:	RANCHO SANTA FR DR./LA COSTA A
Area Type:	All other areas
Jurisdiction:	CARLSBAD
Analysis Year:	YEAR 2010 WITH PROJECT

Project ID: LA COSTA TOWN CENTER
E/W St: LA COSTA EVENUE N/S St: RANCHO SANTA FE DR.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	340	275	156	105	308	79	82	1414	188	193	1232	246
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	89	72	41	28	81	21	22	372	49	51	324	65
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000		1800	2000		1800	2000		1800	2000	
ParkExist												
NumPark												
No. Lanes	1	2	0	1	2	0	2	3	0	2	3	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			0			40			45			100
Adj Flow	358	453		111	365		86	1639		203	1451	
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.362			0.112			0.092			0.106	
Peds Bikes	5	0		5	0		5	0		5	0	
Buses	0	0		0	0		0	0		0	0	
%InProtPhase			0.0			0.0						

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Arriv. Type	5	5		5	5		5	5		5	5	
Unit Ext.	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext of g	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ped Min g		33.2			33.2			33.2			33.2	

13-P 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SANTA FR DR./LA COSTA A
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	2010 PM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	2	3	0	2	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	331	308	145	239	369	113	205	1158	233	178	1274	328
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5	0	40	5	0	0	5	0	100
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	EB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 24.0	G = 5.0	G = 21.0	G =	G = 13.0	G = 42.0	G =	G =
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	348	477		252	465		216	1464		187	1581	
Lane group cap.	438	837		309	586		326	1681		326	1685	
v/c ratio	0.79	0.57		0.82	0.79		0.66	0.87		0.57	0.94	
Green ratio	0.26	0.24		0.18	0.16		0.10	0.32		0.10	0.32	
Unif. delay d1	44.7	43.6		50.9	52.4		56.4	41.4		55.9	42.7	
Delay factor k	0.34	0.16		0.36	0.34		0.24	0.40		0.17	0.45	
Increm. delay d2	9.8	0.9		15.5	7.4		5.0	5.3		2.5	10.6	
PF factor	0.764	0.791		0.849	0.872		0.926	0.682		0.926	0.682	
Control delay	43.9	35.5		58.7	53.1		57.2	33.5		54.2	39.8	
Lane group LOS	D	D		E	D		E	C		D	D	
Apprch. delay	39.0			55.0			36.6			41.3		
Approach LOS	D			E			D			D		
Intersec. delay	41.3			Intersection LOS						D		

HCS2000: Signalized Intersections Release 4.1f

13-P
2010
WP

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OPERATIONAL ANALYSIS

Analyst:	USAI
Agency/Co.:	USAI
Date Performed:	09/11/08
Analysis Time Period:	2010 PM PEAK
Intersection:	RANCHO SANTA FR DR./LA COSTA A
Area Type:	All other areas
Jurisdiction:	CARLSBAD
Analysis Year:	YEAR 2010 WITH PROJECT

Project ID: LA COSTA TOWN CENTER
E/W St: LA COSTA EVENUE N/S St: RANCHO SANTA FE DR.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	331	308	145	239	369	113	205	1158	233	178	1274	328
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	87	81	38	63	97	30	54	305	61	47	335	86
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000		1800	2000		1800	2000		1800	2000	
ParkExist												
NumPark												
No. Lanes	1	2	0	1	2	0	2	3	0	2	3	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			0			40			0			100
Adj Flow	348	477		252	465		216	1464		187	1581	
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.321			0.166			0.167			0.152	
Peds Bikes	5		0	5		0	5		0	5		0
Buses	0	0		0	0		0	0		0	0	
%InProtPhase			0.0			0.0						

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Arriv. Type	5	5		5	5		5	5		5	5	
Unit Ext.	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext of g	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ped Min g		33.2			33.2			33.2			33.2	

14- A
2010
WP

SHORT REPORT

General Information		Site Information	
Analyst	*USAI*	Intersection	*RANCHO SANTA FR DR./CAM. DE LO*
Agency or Co.	*USAI*	Area Type	*All other areas*
Date Performed	*09/11/08*	Jurisdiction	*CARLSBAD*
Time Period	*2010 AM PEAK*	Analysis Year	*YEAR 2010 WITH PROJECT*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	*0*	*0*	*0*	*2*	*0*	*1*	*0*	*3*	*0*	*1*	*3*	*0*
Lane group				*L*		*R*		*TR*		*L*	*T*	
Volume (vph)				*265*		*126*		*1558*	*190*	*95*	*1398*	
% Heavy veh				*2*		*2*		*2*	*2*	*2*	*2*	
PHF				*0.95*		*0.95*		*0.95*	*0.95*	*0.95*	*0.95*	
Actuated (P/A)				*A*		*A*		*A*	*A*	*A*	*A*	
Startup lost time				*2.0*		*2.0*		*2.0*		*2.0*	*2.0*	
Ext. eff. green				*2.0*		*2.0*		*2.0*		*2.0*	*2.0*	
Arrival type				*5*		*5*		*5*		*5*	*5*	
Unit Extension				*3.0*		*3.0*		*3.0*		*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*5*			*5*		*40*	*5*	*0*	*0*			
Lane Width				*12.0*		*12.0*		*12.0*		*12.0*	*12.0*	
Parking/Grade/Parking	*N*		*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking/hr												
Bus stops/hr				*0*		*0*		*0*		*0*	*0*	
Unit Extension				*3.0*		*3.0*		*3.0*		*3.0*	*3.0*	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = *25.0*	G =	G =	G =	G = *15.0*	G = *85.0*	G =	G =
	Y = *5*	Y =	Y =	Y =	Y = *5*	Y = *5*	Y =	Y =

Duration of Analysis (hrs) = *0.25* | Cycle Length C = *140.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				*279*		*91*		*1840*		*100*	*1472*	
Lane group cap.				*581*		*482*		*3189*		*180*	*4004*	
v/c ratio				*0.48*		*0.19*		*0.58*		*0.56*	*0.37*	
Green ratio				*0.18*		*0.32*		*0.61*		*0.11*	*0.75*	
Unif. delay d1				*51.7*		*34.3*		*16.6*		*59.3*	*6.0*	
Delay factor k				*0.11*		*0.11*		*0.17*		*0.15*	*0.11*	
Increm. delay d2				*0.6*		*0.2*		*0.3*		*3.8*	*0.1*	
PF factor				*0.855*		*0.684*		*0.127*		*0.920*	*0.200*	
Control delay				*44.8*		*23.7*		*2.4*		*58.4*	*1.3*	
Lane group LOS				*D*		*C*		*A*		*E*	*A*	
Apprch. delay				*39.6*			*2.4*			*4.9*		
Approach LOS				*D*			*A*			*A*		
Intersec. delay	*7.1*			Intersection LOS						*A*		

14-P
2010
WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SANTA FR DR./CAM. DE LO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	2010 PM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	1	0	3	0	1	3	0
Lane group				L		R		TR		L	T	
Volume (vph)				130		130		1466	200	126	1532	
% Heavy veh				2		2		2	2	2	2	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				5		5		5		5	5	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5			5		40	5	0	0			
Lane Width				12.0		12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 18.0	G =	G =	G =	G = 23.0	G = 74.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				137		95		1754		133	1613	
Lane group cap.				451		530		3254		297	4189	
v/c ratio				0.30		0.18		0.54		0.45	0.39	
Green ratio				0.14		0.35		0.57		0.18	0.78	
Unif. delay d1				50.4		29.0		17.4		47.8	4.3	
Delay factor k				0.11		0.11		0.14		0.11	0.11	
Increm. delay d2				0.4		0.2		0.2		1.1	0.1	
PF factor				0.893		0.635		0.119		0.857	0.232	
Control delay				45.4		18.6		2.3		42.0	1.1	
Lane group LOS				D		B		A		D	A	
Apprch. delay				34.4			2.3			4.2		
Approach LOS				C			A			A		
Intersec. delay	5.2			Intersection LOS						A		

15 - A
2010
WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./CALLE BARCELO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	2	0	1	3	0	1	3	0
Lane group	L	T	R	L	LTR		L	TR		L	TR	
Volume (vph)	136	120	70	295	135	110	55	1502	335	90	1479	94
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	EB Only	WB Only	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 16.0	G = 21.0	G =	G =	G = 12.0	G = 53.0	G =	G =
	Y = 4	Y = 4	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	143	126	74	233	336		58	1934		95	1656	
Lane group cap.	223	261	200	293	612		168	2294		168	2338	
v/c ratio	0.64	0.48	0.37	0.80	0.55		0.35	0.84		0.57	0.71	
Green ratio	0.13	0.13	0.13	0.17	0.17		0.10	0.44		0.10	0.44	
Unif. delay d1	49.3	48.2	47.4	47.4	45.2		50.3	29.8		51.5	27.2	
Delay factor k	0.22	0.11	0.11	0.34	0.15		0.11	0.38		0.16	0.27	
Increm. delay d2	6.1	1.4	1.2	14.1	1.1		1.2	3.1		4.4	1.0	
PF factor	0.897	0.897	0.897	0.859	0.859		0.926	0.473		0.926	0.473	
Control delay	50.3	44.6	43.7	54.8	39.8		47.8	17.1		52.1	13.9	
Lane group LOS	D	D	D	D	D		D	B		D	B	
Apprch. delay	46.8			46.0			18.0			15.9		
Approach LOS	D			D			B			B		
Intersec. delay	22.8			Intersection LOS						C		

15-P
2010
WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./CALLE BARCELO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	2	0	1	3	0	1	3	0
Lane group	L	T	R	L	LTR		L	TR		L	TR	
Volume (vph)	114	85	50	105	55	40	55	1064	276	87	1485	90
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	EB Only	WB Only	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 16.0	G = 21.0	G =	G =	G = 12.0	G = 53.0	G =	G =
	Y = 4	Y = 4	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	120	89	53	83	128		58	1411		92	1658	
Lane group cap.	223	261	200	293	615		168	2286		168	2339	
v/c ratio	0.54	0.34	0.26	0.28	0.21		0.35	0.62		0.55	0.71	
Green ratio	0.13	0.13	0.13	0.17	0.17		0.10	0.44		0.10	0.44	
Unif. delay d1	48.6	47.2	46.7	43.0	42.4		50.3	25.7		51.4	27.2	
Delay factor k	0.14	0.11	0.11	0.11	0.11		0.11	0.20		0.15	0.27	
Increm. delay d2	2.6	0.8	0.7	0.5	0.2		1.2	0.5		3.7	1.0	
PF factor	0.897	0.897	0.897	0.859	0.859		0.926	0.473		0.926	0.473	
Control delay	46.2	43.2	42.6	37.4	36.6		47.8	12.7		51.4	13.9	
Lane group LOS	D	D	D	D	D		D	B		D	B	
Apprch. delay	44.4			36.9			14.1			15.9		
Approach LOS	D			D			B			B		
Intersec. delay	18.4			Intersection LOS						B		

16-A 2010 wp

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OLIVENHAIN RD./RANCHO SANTA FE
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	1	1	1	1	2	1	2	2	1
Lane group		LTR		L	LT	R	L	T	R	L	T	R
Volume (vph)	20	15	25	456	10	698	15	1174	225	306	1513	25
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type		5		5	5	5	5	5	5	5	5	5
Unit Extension		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	15	0	0	0	0	0	0
Lane Width		12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0		0	0	0	0	0	0	0	0	0
Unit Extension		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	EB Only	WB Only	03	04	Excl. Left	SB Only	Thru & RT	08
Timing	G = 11.0	G = 25.0	G =	G =	G = 6.0	G = 16.0	G = 48.0	G =
	Y = 4	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		63		230	261	719	16	1236	237	322	1593	26
Lane group cap.		154		322	360	658	77	1378	842	676	1981	981
v/c ratio		0.41		0.71	0.73	1.09	0.21	0.90	0.28	0.48	0.80	0.03
Green ratio		0.08		0.19	0.19	0.44	0.05	0.37	0.56	0.21	0.53	0.65
Unif. delay d1		56.4		49.2	49.3	36.5	59.7	38.7	14.8	45.3	25.0	7.9
Delay factor k		0.11		0.28	0.29	0.50	0.11	0.42	0.11	0.11	0.35	0.11
Increm. delay d2		1.8		7.3	7.1	63.1	1.3	8.1	0.2	0.5	2.5	0.0
PF factor		0.938		0.841	0.841	0.479	0.968	0.610	0.146	0.825	0.246	0.144
Control delay		54.7		48.7	48.6	80.6	59.1	31.7	2.4	37.9	8.7	1.2
Lane group LOS		D		D	D	F	E	C	A	D	A	A
Apprch. delay	54.7			67.6			27.3			13.4		
Approach LOS	D			E			C			B		
Intersec. delay	32.3			Intersection LOS						C		

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16-A
2010
WP

Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst:	USAI
Agency/Co.:	USAI
Date Performed:	09/11/08
Analysis Time Period:	AM PEAK HOUR
Intersection:	OLIVENHAIN RD./RANCHO SANTA FE
Area Type:	All other areas
Jurisdiction:	CARLSBAD
Analysis Year:	YEAR 2010 WITH PROJECT

Project ID: LA COSTA TOWN CENTER
E/W St: OLIVENHAIN RD. N/S St: RANCHO SANTA FE RD.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	20	15	25	456	10	698	15	1174	225	306	1513	25
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	5	4	7	120	3	184	4	309	59	81	398	7
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat		2000		1800	2000	1800	1800	2000	1800	1800	2000	1800
ParkExist												
NumPark												
No. Lanes	0	1	0	1	1	1	1	2	1	2	2	1
LGConfig		LTR		L	LT	R	L	T	R	L	T	R
Lane Width		12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			15			0			0
Adj Flow		63		230	261	719	16	1236	237	322	1593	26
%InSharedLn				52								
Prop LTs		0.333			0.956			0.000			0.000	
Prop RTs		0.413			0.000	1.000		0.000	1.000		0.000	1.000
Peds Bikes	0		0	0		0	0		0	0		0
Buses		0		0	0	0	0	0	0	0	0	0
%InProtPhase						0.0			0.0			0.0

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arriv. Type		5		5	5	5	5	5	5	5	5	5
Unit Ext.		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext of g		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ped Min g		33.2			33.2			33.2			33.2	

16-P200 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OLIVENHAIN RD./RANCHO SANTA FE
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	1	1	1	1	2	1	2	2	1
Lane group		LTR		L	LT	R	L	T	R	L	T	R
Volume (vph)	20	5	20	425	20	258	10	1404	450	603	1009	30
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type		5		5	5	5	5	5	5	4	5	4
Unit Extension		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width		12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0		0	0	0	0	0	0	0	0	0
Unit Extension		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	EB Only	WB Only	03	04	Excl. Left	SB Only	Thru & RT	08
Timing	G = 11.0	G = 21.0	G =	G =	G = 6.0	G = 16.0	G = 52.0	G =
	Y = 4	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		47		224	244	272	11	1478	474	635	1062	32
Lane group cap.		152		271	303	612	77	1493	842	676	2096	1027
v/c ratio		0.31		0.83	0.81	0.44	0.14	0.99	0.56	0.94	0.51	0.03
Green ratio		0.08		0.16	0.16	0.41	0.05	0.40	0.56	0.21	0.56	0.68
Unif. delay d1		55.9		52.7	52.5	27.9	59.5	38.7	18.3	50.7	17.5	6.6
Delay factor k		0.11		0.36	0.35	0.11	0.11	0.49	0.16	0.45	0.12	0.11
Increm. delay d2		1.2		18.6	14.7	0.5	0.9	20.8	0.9	21.1	0.2	0.0
PF factor		0.938		0.872	0.872	0.541	0.968	0.556	0.146	1.000	0.146	0.318
Control delay		53.6		64.6	60.4	15.6	58.5	42.4	3.5	71.8	2.8	2.1
Lane group LOS		D		E	E	B	E	D	A	E	A	A
Apprch. delay	53.6			45.2			33.1			28.1		
Approach LOS	D			D			C			C		
Intersec. delay	33.4			Intersection LOS						C		

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16-P
2010
WP

OPERATIONAL ANALYSIS

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/11/08
Analysis Time Period: PM PEAK HOUR
Intersection: OLIVENHAIN RD./RANCHO SANTA FE
Area Type: All other areas
Jurisdiction: CARLSBAD
Analysis Year: YEAR 2010 WITH PROJECT
Project ID: LA COSTA TOWN CENTER
E/W St: OLIVENHAIN RD. N/S St: RANCHO SANTA FE RD.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	20	5	20	425	20	258	10	1404	450	603	1009	30
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	5	2	5	112	5	68	3	369	118	159	266	8
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat		2000		1800	2000	1800	1800	2000	1800	1800	2000	1800
ParkExist												
NumPark												
No. Lanes	0	1	0	1	1	1	1	2	1	2	2	1
LGConfig		LTR		L	LT	R	L	T	R	L	T	R
Lane Width		12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			0			0			0
Adj Flow		47		224	244	272	11	1478	474	635	1062	32
%InSharedLn				50								
Prop LTs		0.447			0.916			0.000			0.000	
Prop RTs		0.447			0.000	1.000		0.000	1.000		0.000	1.000
Peds Bikes	0		0		0	0		0	0		0	0
Buses		0		0	0	0	0	0	0	0	0	0
%InProtPhase						0.0			0.0			0.0

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arriv. Type		5		5	5	5	5	5	5	4	5	4
Unit Ext.		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext of g		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ped Min g		33.2			33.2			33.2			33.2	

17-A 2010 WP

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	USAI
Agency/Co.	USAI
Date Performed	09/11/08
Analysis Time Period	AM PEAK HOUR

Site Information

Intersection	RSF/EL CAMINO DEL NORTE
Jurisdiction	ENCINITAS
Analysis Year	YEAR 2010 WITH PROJECT

Project ID LA COSTA TOWN SQUARE

East/West Street: CAM DEL NORTE

North/South Street: RANCHO SANTA FE ROAD

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume	10	5	10	120	5	395
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume	5	430	85	248	584	5
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		L	TR	LT	R	L	TR
PHF	0.95		0.95	0.95	0.95	0.95	0.95	0.95
Flow Rate	25		126	420	457	89	261	619
% Heavy Vehicles	0		0	2	2	2	2	2
No. Lanes	1		2		2		2	
Geometry Group	4b		5		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.4		1.0	0.0	0.0	0.0	1.0	0.0
Prop. Right-Turns	0.4		0.0	1.0	0.0	1.0	0.0	0.0
Prop. Heavy Vehicle								
hLT-adj	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	9.32		9.32	9.32	9.32	9.32	9.32	9.32

Departure Headway and Service Time

hd, initial value	3.20		3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.02		0.11	0.37	0.41	0.08	0.23	0.55
hd, final value	9.32		9.32	9.32	9.32	9.32	9.32	9.32
x, final value	0.06		0.30	0.85	1.00	0.18	0.59	1.32
Move-up time, m	2.3		2.3		2.3		2.3	
Service Time	7.0		7.0		7.0		7.0	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity	275		376	493	457	339	438	619
Delay	12.67		14.70	39.08	70.88	11.42	22.14	180.39
LOS	B		B	E	F	B	C	F
Approach: Delay	12.67		33.45		61.19		133.45	
LOS	B		D		F		F	
Intersection Delay	84.84							
Intersection LOS	F							

17-P
2010
WP

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	USAI
Agency/Co.	USAI
Date Performed	09/11/08
Analysis Time Period	PM PEAK HOUR

Site Information

Intersection	RSF/EL CAMINO DEL NORTE
Jurisdiction	ENCINITAS
Analysis Year	YEAR 2010 WITH PROJECT

Project ID LA COSTA TOWN SQUARE

East/West Street: CAM DEL NORTE

North/South Street: RANCHO SANTA FE ROAD

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume	5	5	5	100	10	182
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume	15	504	135	201	454	10
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		L	TR	LT	R	L	TR
PHF	0.95		0.95	0.95	0.95	0.95	0.95	0.95
Flow Rate	15		105	201	545	142	211	487
% Heavy Vehicles	0		0	2	2	2	2	2
No. Lanes	1		2		2		2	
Geometry Group	4b		5		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.3		1.0	0.0	0.0	0.0	1.0	0.0
Prop. Right-Turns	0.3		0.0	1.0	0.0	1.0	0.0	0.0
Prop. Heavy Vehicle								
hLT-adj	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	8.47		8.47	8.47	8.47	8.47	8.47	8.47

Departure Headway and Service Time

hd, initial value	3.20		3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.01		0.09	0.18	0.48	0.13	0.19	0.43
hd, final value	8.47		8.47	8.47	8.47	8.47	8.47	8.47
x, final value	0.04		0.24	0.40	1.03	0.24	0.42	0.91
Move-up time, m	2.3		2.3		2.3		2.3	
Service Time	6.2		6.2		6.2		6.2	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity	265		355	451	545	392	461	534
Delay	11.47		13.65	14.56	73.49	10.71	15.20	45.45
LOS	B		B	B	F	B	C	E
Approach: Delay	11.47		14.25		60.51		36.31	
LOS	B		B		F		E	
Intersection Delay	41.88							
Intersection LOS	E							

18-A

2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ ALGA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	0	2	3	0	2	3	0
Lane group	L	T	R	L	TR		L	T		L	TR	
Volume (vph)	85	178	262	398	249	280	290	1773		80	974	65
% Heavy veh	2	2	2	2	2	2	2	2		2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A		A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	0	100	10	0	130	10			10	0	60
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 22.0	G = 24.0	G =	G =	G = 18.0	G = 56.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	89	187	171	419	420		305	1866		84	1030	
Lane group cap.	512	640	495	512	600		419	2136		419	2135	
v/c ratio	0.17	0.29	0.35	0.82	0.70		0.73	0.87		0.20	0.48	
Green ratio	0.16	0.17	0.34	0.16	0.17		0.13	0.40		0.13	0.40	
Unif. delay d1	51.1	50.6	34.9	57.1	54.6		58.6	38.7		54.6	31.2	
Delay factor k	0.11	0.11	0.11	0.36	0.27		0.29	0.40		0.11	0.11	
Increm. delay d2	0.2	0.3	0.4	10.1	3.6		6.3	4.3		0.2	0.2	
PF factor	0.876	0.862	0.663	0.876	0.862		0.902	0.556		0.902	0.556	
Control delay	44.9	43.9	23.6	60.1	50.7		59.2	25.9		49.4	17.5	
Lane group LOS	D	D	C	E	D		E	C		D	B	
Apprch. delay	36.3			55.4			30.5			19.9		
Approach LOS	D			E			C			B		
Intersec. delay	33.1			Intersection LOS						C		

HCS2000: Signalized Intersections Release 4.1f

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18-A
2010
WP

OPERATIONAL ANALYSIS

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/11/08
Analysis Time Period: AM PEAK
Intersection: EL CAMINO REAL@ ALGA RD.
Area Type: All other areas
Jurisdiction: CARLSBAD
Analysis Year: YEAR 2010 WITH PROJECT
Project ID: LA COSTA TOWN CENTER
E/W St: AVIARA/ALGA RD. N/S St: EL CAMINO REAL

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	85	178	262	398	249	280	290	1773		80	974	65
% Heavy Veh	2	2	2	2	2	2	2	2		2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95
PK 15 Vol	22	47	69	105	66	74	76	467		21	256	17
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000	1800	1800	2000		1800	2000		1800	2000	
ParkExist												
NumPark												
No. Lanes	2	2	1	2	2	0	2	3	0	2	3	0
LGConfig	L	T	R	L	TR		L	T		L	TR	
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			100			130						60
Adj Flow	89	187	171	419	420		305	1866		84	1030	
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.000	1.000		0.376			0.000			0.005	
Peds Bikes		10	0		10	0		10			10	0
Buses	0	0	0	0	0		0	0		0	0	
%InProtPhase			0.0									

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Arriv. Type	5	5	5	5	5		5	5		5	5	
Unit Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext of g	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ped Min g		33.3			33.3			20.8			20.8	

18-P 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ ALGA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/09	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	0	2	3	0	2	3	0
Lane group	L	T	R	L	TR		L	T		L	TR	
Volume (vph)	125	448	672	474	240	65	394	764		207	2161	130
% Heavy veh	2	2	2	2	2	2	2	2		2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A		A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	0	250	10	0	10	10			10		70
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 22.4	G = 18.0	G =	G =	G = 20.0	G = 59.6	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	132	472	444	499	311		415	804		218	2338	
Lane group cap.	521	480	450	521	465		465	2274		465	2265	
v/c ratio	0.25	0.98	0.99	0.96	0.67		0.89	0.35		0.47	1.03	
Green ratio	0.16	0.13	0.31	0.16	0.13		0.14	0.43		0.14	0.43	
Unif. delay d1	51.5	60.9	48.2	58.3	58.2		58.9	27.2		55.1	40.2	
Delay factor k	0.11	0.49	0.49	0.47	0.24		0.42	0.11		0.11	0.50	
Increm. delay d2	0.3	36.6	38.8	29.0	3.7		19.2	0.1		0.7	27.8	
PF factor	0.873	0.902	0.704	0.873	0.902		0.889	0.506		0.889	0.506	
Control delay	45.2	91.5	72.8	79.9	56.1		71.6	13.8		49.7	48.1	
Lane group LOS	D	F	E	E	E		E	B		D	D	
Apprch. delay	77.7			70.8			33.5			48.3		
Approach LOS	E			E			C			D		
Intersec. delay	53.8			Intersection LOS						D		

HCS2000: Signalized Intersections Release 4.1f

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18-P
2010
WP

OPERATIONAL ANALYSIS

Analyst:	USAI
Agency/Co.:	USAI
Date Performed:	09/11/09
Analysis Time Period:	PM PEAK
Intersection:	EL CAMINO REAL@ ALGA RD.
Area Type:	All other areas
Jurisdiction:	CARLSBAD
Analysis Year:	YEAR 2010 WITH PROJECT

Project ID: LA COSTA TOWN CENTER
E/W St: AVIARA/ALGA RD. N/S St: EL CAMINO REAL

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	125	448	672	474	240	65	394	764		207	2161	130
% Heavy Veh	2	2	2	2	2	2	2	2		2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95
PK 15 Vol	33	118	177	125	63	17	104	201		54	569	34
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000	1800	1800	2000		1800	2000		1800	2000	
ParkExist												
NumPark												
No. Lanes	2	2	1	2	2	0	2	3	0	2	3	0
LGConfig	L	T	R	L	TR		L	T		L	TR	
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			250			10						70
Adj Flow	132	472	444	499	311		415	804		218	2338	
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.000	1.000		0.186			0.000			0.027	
Peds	10			10			10			10		
Bikes		0			0							
Buses	0	0	0	0	0		0	0		0	0	
%InProtPhase			0.0									

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Arriv. Type	5	5	5	5	5		5	5		5	5	
Unit Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext of g	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ped Min g		33.3			33.3			20.8			20.8	

19-A 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ COSTA DEL MAR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	1	0	3	0	1	3	0
Lane group				L		R		TR		L	T	
Volume (vph)				133		112		2501	218	57	1633	
% Heavy veh				2		2		2	2	2	2	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				5		5		5		5	5	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10			10		60	10	0	0			
Lane Width				12.0		12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 15.0	G =	G =	G =	G = 20.0	G = 70.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				140		55		2862		60	1719	
Lane group cap.				407		188		3076		279	4228	
v/c ratio				0.34		0.29		0.93		0.22	0.41	
Green ratio				0.13		0.13		0.58		0.17	0.79	
Unif. delay d1				48.0		47.7		22.8		43.2	3.8	
Delay factor k				0.11		0.11		0.45		0.11	0.11	
Increm. delay d2				0.5		0.9		5.9		0.4	0.1	
PF factor				0.905		0.905		0.120		0.867	0.240	
Control delay				43.9		44.0		8.6		37.8	1.0	
Lane group LOS				D		D		A		D	A	
Apprch. delay				44.0			8.6			2.2		
Approach LOS				D			A			A		
Intersec. delay	7.7			Intersection LOS						A		

19-9
2010
WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ COSTA DEL MAR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	1	0	3	0	1	3	0
Lane group				L		R		TR		L	T	
Volume (vph)				195		130		1499	50	179	3156	
% Heavy veh				2		2		2	2	2	2	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				5		5		5		5	5	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10			10		60	10	0	0			
Lane Width				12.0		12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 15.0	G =	G =	G =	G = 20.0	G = 70.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				205		74		1631		188	3322	
Lane group cap.				407		188		3100		279	4228	
v/c ratio				0.50		0.39		0.53		0.67	0.79	
Green ratio				0.13		0.13		0.58		0.17	0.79	
Unif. delay d1				49.0		48.3		15.0		46.9	6.9	
Delay factor k				0.11		0.11		0.13		0.25	0.33	
Increm. delay d2				1.0		1.4		0.2		6.3	1.0	
PF factor				0.905		0.905		0.120		0.867	0.240	
Control delay				45.4		45.1		2.0		47.0	2.7	
Lane group LOS				D		D		A		D	A	
Apprch. delay				45.3			2.0			5.1		
Approach LOS				D			A			A		
Intersec. delay	6.2			Intersection LOS						A		

20-A

2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 SB OFF RAMP/LA COSTA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	2	2	0	0	0	0	1	1	1
Lane group		TR		L	T					L	LT	R
Volume (vph)		470	85	509	340					584	10	392
% Heavy veh		2	2	2	2					2	2	2
PHF		0.95	0.95	0.95	0.95					0.95	0.95	0.95
Actuated (P/A)		A	A	A	A					A	A	A
Startup lost time		2.0		2.0	2.0					2.0	2.0	2.0
Ext. eff. green		2.0		2.0	2.0					2.0	2.0	2.0
Arrival type		5		5	5					5	5	5
Unit Extension		3.0		3.0	3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0				0			0		0
Lane Width		12.0		12.0	12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0		0	0					0	0	0
Unit Extension		3.0		3.0	3.0					3.0	3.0	3.0

Phasing	Thru & RT	WB Only	03	04	SB Only	06	07	08
Timing	G = 30.0	G = 40.0	G =	G =	G = 35.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		584		536	358					467	159	413
Lane group cap.		912		1085	2333					489	492	437
v/c ratio		0.64		0.49	0.15					0.96	0.32	0.95
Green ratio		0.25		0.33	0.63					0.29	0.29	0.29
Unif. delay d1		40.2		31.9	9.3					41.7	33.2	41.6
Delay factor k		0.22		0.11	0.11					0.46	0.11	0.46
Increm. delay d2		1.5		0.4	0.0					29.5	0.4	29.5
PF factor		0.778		0.667	0.133					0.725	0.725	0.725
Control delay		32.8		21.6	1.3					59.8	24.5	59.7
Lane group LOS		C		C	A					E	C	E
Apprch. delay	32.8			13.5						54.4		
Approach LOS	C			B						D		
Intersec. delay	34.8			Intersection LOS						C		

20-P
2010
WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 SB OFF RAMP/LA COSTA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	2	2	0	0	0	0	1	1	1
Lane group		TR		L	T					L	LT	R
Volume (vph)		630	70	480	651					363	15	228
% Heavy veh		2	2	2	2					2	2	2
PHF		0.95	0.95	0.95	0.95					0.95	0.95	0.95
Actuated (P/A)		A	A	A	A					A	A	A
Startup lost time		2.0		2.0	2.0					2.0	2.0	2.0
Ext. eff. green		2.0		2.0	2.0					2.0	2.0	2.0
Arrival type		5		5	5					5	5	5
Unit Extension		3.0		3.0	3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0				0			0		0
Lane Width		12.0		12.0	12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0		0	0					0	0	0
Unit Extension		3.0		3.0	3.0					3.0	3.0	3.0

Phasing	Thru & RT	WB Only	03	04	SB Only	06	07	08
Timing	G = 30.0	G = 40.0	G =	G =	G = 35.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		737		505	685					290	108	240
Lane group cap.		919		1085	2333					489	494	437
v/c ratio		0.80		0.47	0.29					0.59	0.22	0.55
Green ratio		0.25		0.33	0.63					0.29	0.29	0.29
Unif. delay d1		42.2		31.6	10.3					36.4	32.2	35.8
Delay factor k		0.35		0.11	0.11					0.18	0.11	0.15
Increm. delay d2		5.2		0.3	0.1					1.9	0.2	1.5
PF factor		0.778		0.667	0.133					0.725	0.725	0.725
Control delay		38.0		21.4	1.4					28.3	23.6	27.5
Lane group LOS		D		C	A					C	C	C
Apprch. delay	38.0			9.9						27.2		
Approach LOS	D			A						C		
Intersec. delay	22.3			Intersection LOS						C		

21-A
2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 NB OFF RAMP/LA COSTA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	3	1	0	1	2	0	0	0
Lane group	L	T			T	R		LT	R			
Volume (vph)	185	868			789	531	60	7	499			
% Heavy veh	0	2			2	2	2	2	2			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0	2.0		2.0	2.0			
Ext. eff. green	2.0	2.0			2.0	2.0		2.0	2.0			
Arrival type	5	5			5	5		5	5			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			
Ped/Bike/RTOR Volume				0	0	100	0		0	0		
Lane Width	12.0	12.0			12.0	12.0		12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0	0		0	0			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 25.0	G = 40.0	G =	G =	G = 40.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	195	914			831	454		70	525			
Lane group cap.	356	2178			1780	1062		563	885			
v/c ratio	0.55	0.42			0.47	0.43		0.12	0.59			
Green ratio	0.21	0.58			0.33	0.71		0.33	0.33			
Unif. delay d1	42.4	13.8			31.6	7.3		27.8	33.2			
Delay factor k	0.15	0.11			0.11	0.11		0.11	0.18			
Increm. delay d2	1.8	0.1			0.2	0.3		0.1	1.1			
PF factor	0.825	0.120			0.667	0.171		0.667	0.667			
Control delay	36.8	1.8			21.2	1.5		18.6	23.2			
Lane group LOS	D	A			C	A		B	C			
Apprch. delay	7.9			14.3			22.7					
Approach LOS	A			B			C					
Intersec. delay	13.6			Intersection LOS						B		

21-8 2a0wp

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 NB OFF RAMP/LA COSTA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	3	1	0	1	2	0	0	0
Lane group	L	T			T	R		LT	R			
Volume (vph)	120	873			926	296	205	5	702			
% Heavy veh	0	2			2	2	2	2	2			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0	2.0		2.0	2.0			
Ext. eff. green	2.0	2.0			2.0	2.0		2.0	2.0			
Arrival type	5	5			5	5		5	5			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			
Ped/Bike/RTOR Volume				0	0	100	0		0	0		
Lane Width	12.0	12.0			12.0	12.0		12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0	0		0	0			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 30.0	G = 35.0	G =	G =	G = 40.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	126	919			975	206		221	739			
Lane group cap.	428	2178			1558	1000		561	885			
v/c ratio	0.29	0.42			0.63	0.21		0.39	0.84			
Green ratio	0.25	0.58			0.29	0.67		0.33	0.33			
Unif. delay d1	36.4	13.8			36.8	7.7		30.7	37.0			
Delay factor k	0.11	0.11			0.21	0.11		0.11	0.37			
Increm. delay d2	0.4	0.1			0.8	0.1		0.5	7.0			
PF factor	0.778	0.120			0.725	0.150		0.667	0.667			
Control delay	28.7	1.8			27.5	1.3		20.9	31.6			
Lane group LOS	C	A			C	A		C	C			
Apprch. delay	5.0			22.9			29.2					
Approach LOS	A			C			C					
Intersec. delay	18.9			Intersection LOS						B		

22 A 2010 wp

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./PIRAEUS ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	1	4	0	1	0	1	0	0	0
Lane group		TR		L	T		L		R			
Volume (vph)		1167	200	75	1210		110		65			
% Heavy veh		2	0	0	2		2		2			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Actuated (P/A)		A	A	A	A		A	A	A			
Startup lost time		2.0		2.0	2.0		2.0		2.0			
Ext. eff. green		2.0		2.0	2.0		2.0		2.0			
Arrival type		5		5	5		5		5			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0		0				0		0	0		
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0		0	0		0		0			
Unit Extension		3.0		3.0	3.0		3.0		3.0			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 55.0	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 90.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1439		79	1274		116		68			
Lane group cap.		2238		190	5539		186		167			
v/c ratio		0.64		0.42	0.23		0.62		0.41			
Green ratio		0.61		0.11	0.78		0.11		0.11			
Unif. delay d1		11.2		37.3	2.7		38.2		37.2			
Delay factor k		0.22		0.11	0.11		0.21		0.11			
Increm. delay d2		0.6		1.5	0.0		6.4		1.6			
PF factor		0.129		0.917	0.225		0.917		0.917			
Control delay		2.1		35.6	0.6		41.4		35.8			
Lane group LOS		A		D	A		D		D			
Apprch. delay	2.1			2.7			39.3					
Approach LOS	A			A			D					
Intersec. delay	4.7			Intersection LOS						A		

22-P 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./PIRAEUS ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	1	4	0	1	0	1	0	0	0
Lane group		TR		L	T		L		R			
Volume (vph)		1520	55	80	1117		105		36			
% Heavy veh		2	0	0	2		2		2			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Actuated (P/A)		A	A	A	A		A	A	A			
Startup lost time		2.0		2.0	2.0		2.0		2.0			
Ext. eff. green		2.0		2.0	2.0		2.0		2.0			
Arrival type		5		5	5		5		5			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0		0				0		0	0		
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0		0	0		0		0			
Unit Extension		3.0		3.0	3.0		3.0		3.0			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 55.0	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1658		84	1176		111		38			
Lane group cap.		2271		190	5539		186		167			
v/c ratio		0.73		0.44	0.21		0.60		0.23			
Green ratio		0.61		0.11	0.78		0.11		0.11			
Unif. delay d1		12.3		37.4	2.7		38.1		36.5			
Delay factor k		0.29		0.11	0.11		0.19		0.11			
Increm. delay d2		1.2		1.6	0.0		5.2		0.7			
PF factor		0.129		0.917	0.225		0.917		0.917			
Control delay		2.8		35.9	0.6		40.1		34.1			
Lane group LOS		A		D	A		D		C			
Apprch. delay	2.8			3.0			38.6					
Approach LOS	A			A			D					
Intersec. delay	4.6			Intersection LOS						A		

23-A

2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./SAXONY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	1	2	0	1	0	1	0	0	0
Lane group		TR		L	T		L		R			
Volume (vph)		1156	76	106	1237		48		52			
% Heavy veh		2	0	0	2		2		2			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Actuated (P/A)		A	A	A	A		A	A	A			
Startup lost time		2.0		2.0	2.0		2.0		2.0			
Ext. eff. green		2.0		2.0	2.0		2.0		2.0			
Arrival type		5		5	5		3		3			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0		0				0		0	0		
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0		0	0		0		0			
Unit Extension		3.0		3.0	3.0		3.0		3.0			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 55.0	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1297		112	1302		51		55			
Lane group cap.		2263		190	2903		186		167			
v/c ratio		0.57		0.59	0.45		0.27		0.33			
Green ratio		0.61		0.11	0.78		0.11		0.11			
Unif. delay d1		10.5		38.0	3.4		36.7		36.9			
Delay factor k		0.17		0.18	0.11		0.11		0.11			
Increm. delay d2		0.4		4.8	0.1		0.8		1.2			
PF factor		0.129		0.917	0.225		1.000		1.000			
Control delay		1.7		39.6	0.9		37.5		38.1			
Lane group LOS		A		D	A		D		D			
Apprch. delay	1.7			3.9			37.8					
Approach LOS	A			A			D					
Intersec. delay	4.2			Intersection LOS						A		

23-P

2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./SAXONY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	1	2	0	1	0	1	0	0	0
Lane group		TR		L	T		L		R			
Volume (vph)		1472	64	77	1151		46		98			
% Heavy veh		2	0	0	2		2		2			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Actuated (P/A)		A	A	A	A		A	A	A			
Startup lost time		2.0		2.0	2.0		2.0		2.0			
Ext. eff. green		2.0		2.0	2.0		2.0		2.0			
Arrival type		5		5	5		3		3			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0		0				0		0	0		
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0		0	0		0		0			
Unit Extension		3.0		3.0	3.0		3.0		3.0			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 55.0	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 90.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1616		81	1212		48		103			
Lane group cap.		2269		190	2903		186		167			
v/c ratio		0.71		0.43	0.42		0.26		0.62			
Green ratio		0.61		0.11	0.78		0.11		0.11			
Unif. delay d1		12.1		37.3	3.3		36.6		38.2			
Delay factor k		0.28		0.11	0.11		0.11		0.20			
Increm. delay d2		1.1		1.5	0.1		0.7		6.7			
PF factor		0.129		0.917	0.225		1.000		1.000			
Control delay		2.6		35.8	0.8		37.3		44.9			
Lane group LOS		A		D	A		D		D			
Apprch. delay	2.6			3.0			42.5					
Approach LOS	A			A			D					
Intersec. delay	4.8			Intersection LOS						A		

24-A 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ LA COSTA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	1	2	1	2	3	0	2	3	1
Lane group	L	T	R	L	T	R	L	TR		L	T	R
Volume (vph)	492	341	375	169	533	156	250	2071	50	98	1108	560
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	0	150	10	0	50	10	0	30	10	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 22.0	G = 24.0	G =	G =	G = 14.0	G = 50.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	518	359	237	178	561	112	263	2201		103	1166	589
Lane group cap.	551	689	488	284	689	488	351	2051		351	2054	881
v/c ratio	0.94	0.52	0.49	0.63	0.81	0.23	0.75	1.07		0.29	0.57	0.67
Green ratio	0.17	0.18	0.33	0.17	0.18	0.33	0.11	0.38		0.11	0.38	0.59
Unif. delay d1	53.3	47.8	34.7	50.2	50.9	31.5	56.3	40.0		53.4	31.5	17.9
Delay factor k	0.45	0.13	0.11	0.21	0.36	0.11	0.30	0.50		0.11	0.16	0.24
Increm. delay d2	24.4	0.7	0.8	4.3	7.5	0.2	8.7	42.8		0.5	0.4	2.0
PF factor	0.864	0.849	0.670	0.864	0.849	0.670	0.920	0.583		0.920	0.583	0.123
Control delay	70.5	41.3	24.0	47.7	50.6	21.4	60.4	66.1		49.6	18.7	4.2
Lane group LOS	E	D	C	D	D	C	E	E		D	B	A
Apprch. delay	51.2			46.2			65.5			15.8		
Approach LOS	D			D			E			B		
Intersec. delay	45.7			Intersection LOS						D		

HCS2000: Signalized Intersections Release 4.1f

24-A
2010
WP

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OPERATIONAL ANALYSIS

Analyst:	USAI
Agency/Co.:	USAI
Date Performed:	09/11/08
Analysis Time Period:	AM PEAK
Intersection:	EL CAMINO REAL@ LA COSTA AVE.
Area Type:	All other areas
Jurisdiction:	CARLSBAD
Analysis Year:	YEAR 2010 WITH PROJECT

Project ID: LA COSTA TOWN CENTER
E/W St: LA COSTA AVE. N/S St: EL CAMINO REAL

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	492	341	375	169	533	156	250	2071	50	98	1108	560
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	129	90	99	44	140	41	66	545	13	26	292	147
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000	1800	1800	2000	1800	1800	2000		1800	2000	1800
ParkExist												
NumPark												
No. Lanes	2	2	1	1	2	1	2	3	0	2	3	1
LGConfig	L	T	R	L	T	R	L	TR		L	T	R
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
RTOR Vol			150			50			30			0
Adj Flow	518	359	237	178	561	112	263	2201		103	1166	589
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.000	1.000		0.000	1.000		0.010			0.000	1.000
Peds Bikes		10	0		10	0		10	0		10	0
Buses	0	0	0	0	0	0	0	0		0	0	0
%InProtPhase			0.0			0.0						0.0

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Arriv. Type	5	5	5	5	5	5	5	5		5	5	5
Unit Ext.	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext of g	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ped Min g		33.3			33.3			20.8			20.8	

24-P 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ LA COSTA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	1	2	1	2	3	0	2	3	1
Lane group	L	T	R	L	T	R	L	TR		L	T	R
Volume (vph)	625	590	355	125	359	73	265	1026	110	287	2445	604
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	0	0	10		0	10	0	60	10	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	EB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 13.0	G = 9.0	G = 15.0	G =	G = 14.5	G = 58.0	G =	G =
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 134.5		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	658	621	374	132	378	77	279	1133		302	2574	636
Lane group cap.	654	805	517	162	416	385	351	2286		351	2303	997
v/c ratio	1.01	0.77	0.72	0.81	0.91	0.20	0.79	0.50		0.86	1.12	0.64
Green ratio	0.20	0.22	0.36	0.10	0.11	0.26	0.11	0.43		0.11	0.43	0.67
Unif. delay d1	53.8	49.6	37.2	59.6	59.1	39.2	58.5	27.7		59.0	38.3	12.8
Delay factor k	0.50	0.32	0.28	0.36	0.43	0.11	0.34	0.11		0.39	0.50	0.22
Increm. delay d2	36.7	4.6	5.0	26.4	23.5	0.3	12.0	0.2		14.1	57.7	1.0
PF factor	0.833	0.817	0.624	0.929	0.916	0.770	0.919	0.495		0.919	0.495	0.151
Control delay	81.5	45.2	28.2	81.7	77.6	30.4	65.8	13.9		68.4	76.6	2.9
Lane group LOS	F	D	C	F	E	C	E	B		E	E	A
Apprch. delay	55.8			72.4			24.1			62.6		
Approach LOS	E			E			C			E		
Intersec. delay	54.2			Intersection LOS						D		

HCS2000: Signalized Intersections Release 4.1f

24-P
2010
WP

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OPERATIONAL ANALYSIS

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/11/08
Analysis Time Period: PM PEAK
Intersection: EL CAMINO REAL@ LA COSTA AVE.
Area Type: All other areas
Jurisdiction: CARLSBAD
Analysis Year: YEAR 2010 WITH PROJECT
Project ID: LA COSTA TOWN CENTER
E/W St: LA COSTA AVE. N/S St: EL CAMINO REAL

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	625	590	355	125	359	73	265	1026	110	287	2445	604
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	164	155	93	33	94	19	70	270	29	76	643	159
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000	1800	1800	2000	1800	1800	2000		1800	2000	1800
ParkExist												
NumPark												
No. Lanes	2	2	1	1	2	1	2	3	0	2	3	1
LGConfig	L	T	R	L	T	R	L	TR		L	T	R
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
RTOR Vol			0			0			60			0
Adj Flow	658	621	374	132	378	77	279	1133		302	2574	636
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.000	1.000		0.000	1.000		0.047			0.000	1.000
Peds Bikes		10	0		10			10	0		10	0
Buses	0	0	0	0	0	0	0	0		0	0	0
%InProtPhase			0.0									0.0

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Arriv. Type	5	5	5	5	5	5	5	5		5	5	5
Unit Ext.	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
I Factor		1.000			1.000			1.000			0.700	
Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext of g	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ped Min g		33.3			33.3			20.8			20.8	

25-A

2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./VIEJO CASTILLA W
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	2	0	0	0	0	1	0	1
Lane group	L	T			TR					L		R
Volume (vph)	28	603			740	10				37		115
% Heavy veh	0	2			2	2				0		0
PHF	0.95	0.95			0.95	0.95				0.95		0.95
Actuated (P/A)	A	A			A	A				A		A
Startup lost time	2.0	2.0			2.0					2.0		2.0
Ext. eff. green	2.0	2.0			2.0					2.0		2.0
Arrival type	5	5			5					4		4
Unit Extension	3.0	3.0			3.0					3.0		3.0
Ped/Bike/RTOR Volume				0	0	0	0			0	0	0
Lane Width	12.0	12.0			12.0					12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0					0		0
Unit Extension	3.0	3.0			3.0					3.0		3.0

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 11.0	G = 40.0	G =	G =	G = 9.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 75.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	29	635			790					39		121
Lane group cap.	251	2787			1987					205		184
v/c ratio	0.12	0.23			0.40					0.19		0.66
Green ratio	0.15	0.75			0.53					0.12		0.12
Unif. delay d1	27.8	2.9			10.4					29.7		31.5
Delay factor k	0.11	0.11			0.11					0.11		0.23
Increm. delay d2	0.2	0.0			0.1					0.5		8.3
PF factor	0.885	0.197			0.238					1.000		1.000
Control delay	24.8	0.6			2.6					30.2		39.8
Lane group LOS	C	A			A					C		D
Apprch. delay	1.7			2.6						37.5		
Approach LOS	A			A						D		
Intersec. delay	5.7			Intersection LOS						A		

25-P

2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./VIEJO CASTILLA W
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	2	0	0	0	0	1	0	1
Lane group	L	T			TR					L		R
Volume (vph)	215	890			866	25				15		55
% Heavy veh	0	2			2	2				0		0
PHF	0.95	0.95			0.95	0.95				0.95		0.95
Actuated (P/A)	A	A			A	A				A		A
Startup lost time	2.0	2.0			2.0					2.0		2.0
Ext. eff. green	2.0	2.0			2.0					2.0		2.0
Arrival type	5	5			5					5		5
Unit Extension	3.0	3.0			3.0					3.0		3.0
Ped/Bike/RTOR Volume				0	0	0	0			0	0	0
Lane Width	12.0	12.0			12.0					12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0					0		0
Unit Extension	3.0	3.0			3.0					3.0		3.0

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 18.0	G = 43.0	G =	G =	G = 14.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	226	937			938					16		58
Lane group cap.	342	2738			1792					266		238
v/c ratio	0.66	0.34			0.52					0.06		0.24
Green ratio	0.20	0.73			0.48					0.16		0.16
Unif. delay d1	33.2	4.3			16.4					32.4		33.4
Delay factor k	0.24	0.11			0.13					0.11		0.11
Increm. delay d2	1.9	0.0			0.1					0.1		0.5
PF factor	0.833	0.188			0.390					0.877		0.877
Control delay	29.6	0.8			6.5					28.5		29.8
Lane group LOS	C	A			A					C		C
Apprch. delay	6.4			6.5						29.5		
Approach LOS	A			A						C		
Intersec. delay	7.2			Intersection LOS						A		

26-A

2010

WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./ROMERIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	2	0	0	1	0	0	1	0
Lane group	L	T	R	L	TR			LTR			LTR	
Volume (vph)	15	568	35	30	635	28	102	10	8	102	5	10
% Heavy veh	0	2	0	0	2	2	2	2	2	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0			2.0			2.0	
Arrival type	5	5	5	5	5			5			5	
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0			0			0	
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 10.0	G = 39.0	G =	G =	G = 26.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 90.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	16	598	37	32	697			126			123	
Lane group cap.	190	850	663	190	1608			346			349	
v/c ratio	0.08	0.70	0.06	0.17	0.43			0.36			0.35	
Green ratio	0.11	0.43	0.43	0.11	0.43			0.29			0.29	
Unif. delay d1	35.9	20.8	14.8	36.2	17.8			25.4			25.3	
Delay factor k	0.11	0.27	0.11	0.11	0.11			0.11			0.11	
Increm. delay d2	0.2	2.6	0.0	0.4	0.2			0.7			0.6	
PF factor	0.917	0.490	0.490	0.917	0.490			0.729			0.729	
Control delay	33.1	12.8	7.3	33.6	8.9			19.2			19.1	
Lane group LOS	C	B	A	C	A			B			B	
Apprch. delay	13.0			10.0			19.2			19.1		
Approach LOS	B			A			B			B		
Intersec. delay	12.6			Intersection LOS						B		

26-P
2010
WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./ROMERIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	2	0	0	1	0	0	1	0
Lane group	L	T	R	L	TR			LTR			LTR	
Volume (vph)	10	850	45	46	846	131	35	5	31	33	5	10
% Heavy veh	0	2	0	0	2	2	2	2	2	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0			2.0			2.0	
Arrival type	5	5	5	5	5			5			5	
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0			0			0	
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 8.0	G = 47.0	G =	G =	G = 20.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 90.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	11	895	47	48	1029			75			51	
Lane group cap.	152	1024	799	152	1910			314			310	
v/c ratio	0.07	0.87	0.06	0.32	0.54			0.24			0.16	
Green ratio	0.09	0.52	0.52	0.09	0.52			0.22			0.22	
Unif. delay d1	37.6	18.9	10.6	38.4	14.3			28.7			28.3	
Delay factor k	0.11	0.40	0.11	0.11	0.14			0.11			0.11	
Increm. delay d2	0.2	8.5	0.0	1.2	0.3			0.4			0.3	
PF factor	0.935	0.271	0.271	0.935	0.271			0.810			0.810	
Control delay	35.4	13.6	2.9	37.1	4.2			23.7			23.1	
Lane group LOS	D	B	A	D	A			C			C	
Apprch. delay	13.4			5.7			23.7			23.1		
Approach LOS	B			A			C			C		
Intersec. delay	10.1			Intersection LOS						B		

27-A

2010

WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./CADENCIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	2	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Volume (vph)	20	667	5	25	612	30	5	10	46	76	20	60
% Heavy veh	0	2	0	0	2	2	2	2	2	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0		2.0	2.0			2.0			2.0	
Arrival type	5	5		5	5			5			5	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0			0	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 5.0	G = 45.0	G =	G =	G = 25.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	21	707		26	676			64			164	
Lane group cap.	95	980		95	1854			432			391	
v/c ratio	0.22	0.72		0.27	0.36			0.15			0.42	
Green ratio	0.06	0.50		0.06	0.50			0.28			0.28	
Unif. delay d1	40.6	17.6		40.8	13.8			24.5			26.6	
Delay factor k	0.11	0.28		0.11	0.11			0.11			0.11	
Increm. delay d2	1.2	2.6		1.6	0.1			0.2			0.7	
PF factor	0.961	0.333		0.961	0.333			0.744			0.744	
Control delay	40.2	8.5		40.7	4.7			18.4			20.5	
Lane group LOS	D	A		D	A			B			C	
Apprch. delay	9.4			6.0			18.4			20.5		
Approach LOS	A			A			B			C		
Intersec. delay	9.4			Intersection LOS						A		

27-8
2010
WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./CADENCIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	2	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Volume (vph)	148	751	15	27	847	57	10	10	34	78	5	25
% Heavy veh	0	2	0	0	2	2	2	2	2	0	0	0
PHF	0.99	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0		2.0	2.0			2.0			2.0	
Arrival type	5	5		5	5			5			5	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0			0	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 10.0	G = 40.0	G =	G =	G = 25.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	149	807		28	952			58			113	
Lane group cap.	190	869		190	1644			427			370	
v/c ratio	0.78	0.93		0.15	0.58			0.14			0.31	
Green ratio	0.11	0.44		0.11	0.44			0.28			0.28	
Unif. delay d1	38.9	23.7		36.1	18.7			24.4			25.6	
Delay factor k	0.33	0.44		0.11	0.17			0.11			0.11	
Increm. delay d2	19.1	16.0		0.4	0.5			0.1			0.5	
PF factor	0.917	0.467		0.917	0.467			0.744			0.744	
Control delay	54.8	27.0		33.5	9.2			18.3			19.5	
Lane group LOS	D	C		C	A			B			B	
Apprch. delay	31.4			9.9			18.3			19.5		
Approach LOS	C			A			B			B		
Intersec. delay	20.4			Intersection LOS						C		

28-A

2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 SB OFF RAMP/LEUCADIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	1	2	2	0	0	0	0	1	1	1
Lane group		T	R	L	T					L	LT	R
Volume (vph)		1293	228	390	417					429	1	52
% Heavy veh		2	0	0	2					0	0	0
PHF		0.95	0.95	0.95	0.95					0.95	0.95	0.95
Actuated (P/A)		A	A	A	A					A	A	A
Startup lost time		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Ext. eff. green		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Arrival type		5	5	5	5					5	5	5
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0				0			0		0
Lane Width		12.0	12.0	12.0	12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0	0	0	0					0	0	0
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0

Phasing	Thru & RT	WB Only	03	04	SB Only	06	07	08
Timing	G = 50.0	G = 25.0	G =	G =	G = 30.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1361	240	411	439					344	109	55
Lane group cap.		1555	637	692	2489					428	429	383
v/c ratio		0.88	0.38	0.59	0.18					0.80	0.25	0.14
Green ratio		0.42	0.42	0.21	0.67					0.25	0.25	0.25
Unif. delay d1		32.1	24.2	42.9	7.6					42.2	36.0	35.0
Delay factor k		0.40	0.11	0.18	0.11					0.35	0.11	0.11
Increm. delay d2		5.9	0.4	1.4	0.0					10.7	0.3	0.2
PF factor		0.524	0.524	0.825	0.150					0.778	0.778	0.778
Control delay		22.7	13.1	36.8	1.2					43.5	28.3	27.4
Lane group LOS		C	B	D	A					D	C	C
Apprch. delay	21.3			18.4						38.5		
Approach LOS	C			B						D		
Intersec. delay	23.4			Intersection LOS						C		

28P
2010
WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 SB OFF RAMP/LEUCADIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	1	2	2	0	0	0	0	1	1	1
Lane group		T	R	L	T					L	LT	R
Volume (vph)		1037	74	321	671					517	1	126
% Heavy veh		2	0	0	2					0	0	0
PHF		0.95	0.95	0.95	0.95					0.95	0.95	0.95
Actuated (P/A)		A	A	A	A					A	A	A
Startup lost time		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Ext. eff. green		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Arrival type		5	5	5	5					5	5	5
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0				0			0		0
Lane Width		12.0	12.0	12.0	12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0	0	0	0					0	0	0
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0

Phasing	Thru & RT	WB Only	03	04	SB Only	06	07	08
Timing	G = 45.0	G = 25.0	G =	G =	G = 35.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 120.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1092	78	338	706					413	132	133
Lane group cap.		1400	574	692	2333					499	500	446
v/c ratio		0.78	0.14	0.49	0.30					0.83	0.26	0.30
Green ratio		0.38	0.38	0.21	0.63					0.29	0.29	0.29
Unif. delay d1		33.1	24.7	41.9	10.4					39.7	32.6	33.0
Delay factor k		0.33	0.11	0.11	0.11					0.37	0.11	0.11
Increm. delay d2		2.9	0.1	0.5	0.1					11.1	0.3	0.4
PF factor		0.600	0.600	0.825	0.133					0.725	0.725	0.725
Control delay		22.8	14.9	35.1	1.5					39.9	23.9	24.3
Lane group LOS		C	B	D	A					D	C	C
Apprch. delay	22.3			12.3						33.7		
Approach LOS	C			B						C		
Intersec. delay	21.4			Intersection LOS						C		

29-A

2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 NB OFF RAMP/LEUCADIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	3	0	1	1	2	0	0	0
Lane group	L	T			TR		L	LT	R			
Volume (vph)	750	972			717	369	90	35	299			
% Heavy veh	2	2			2	2	2	2	2			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0		2.0	2.0	2.0			
Ext. eff. green	2.0	2.0			2.0		2.0	2.0	2.0			
Arrival type	5	5			5		5	5	5			
Unit Extension	3.0	3.0			3.0		3.0	3.0	3.0			
Ped/Bike/RTOR Volume				0		200	0		0	0		
Lane Width	12.0	12.0			12.0		12.0	12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0		0	0	0			
Unit Extension	3.0	3.0			3.0		3.0	3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 52.0	G = 28.0	G =	G =	G = 25.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	789	1023			933		95	37	315			
Lane group cap.	726	2644			1211		349	368	553			
v/c ratio	1.09	0.39			0.77		0.27	0.10	0.57			
Green ratio	0.43	0.71			0.23		0.21	0.21	0.21			
Unif. delay d1	34.0	7.0			43.0		39.9	38.4	42.7			
Delay factor k	0.50	0.11			0.32		0.11	0.11	0.16			
Increm. delay d2	59.4	0.1			3.1		0.4	0.1	1.4			
PF factor	0.490	0.171			0.797		0.825	0.825	0.825			
Control delay	76.1	1.3			37.4		33.3	31.8	36.6			
Lane group LOS	E	A			D		C	C	D			
Apprch. delay	33.9			37.4			35.5					
Approach LOS	C			D			D					
Intersec. delay	35.1			Intersection LOS						D		

29-P
2010
WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 NB OFF RAMP/LEUCADIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	3	0	1	1	2	0	0	0
Lane group	L	T			TR		L	LT	R			
Volume (vph)	444	1110			780	382	212	45	377			
% Heavy veh	0	2			2	2	2	2	2			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0		2.0	2.0	2.0			
Ext. eff. green	2.0	2.0			2.0		2.0	2.0	2.0			
Arrival type	5	5			5		5	5	5			
Unit Extension	3.0	3.0			3.0		3.0	3.0	3.0			
Ped/Bike/RTOR Volume				0		200	0		0	0		
Lane Width	12.0	12.0			12.0		12.0	12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0		0	0	0			
Unit Extension	3.0	3.0			3.0		3.0	3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 50.0	G = 30.0	G =	G =	G = 25.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	467	1168			1013		223	47	397			
Lane group cap.	712	2644			1297		349	368	553			
v/c ratio	0.66	0.44			0.78		0.64	0.13	0.72			
Green ratio	0.42	0.71			0.25		0.21	0.21	0.21			
Unif. delay d1	28.1	7.4			41.9		43.4	38.6	44.2			
Delay factor k	0.23	0.11			0.33		0.22	0.11	0.28			
Increm. delay d2	2.2	0.1			3.2		3.9	0.2	4.5			
PF factor	0.524	0.171			0.778		0.825	0.825	0.825			
Control delay	16.9	1.4			35.8		39.7	32.0	40.9			
Lane group LOS	B	A			D		D	C	D			
Apprch. delay	5.8			35.8			39.9					
Approach LOS	A			D			D					
Intersec. delay	21.8			Intersection LOS						C		

30-A

2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/URANIA/CLARK AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	3	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	30	1231	15	15	930	15	91	5	27	225	5	65
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 10.0	G = 50.0	G = 0.0	G =	G = 20.0	G = 15.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 0	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 115.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	32	1312		16	995		96	33		237	73	
Lane group cap.	146	1620		146	2317		291	223		291	220	
v/c ratio	0.22	0.81		0.11	0.43		0.33	0.15		0.81	0.33	
Green ratio	0.09	0.43		0.09	0.43		0.17	0.13		0.17	0.13	
Unif. delay d1	48.9	28.4		48.4	22.6		41.6	44.3		45.7	45.4	
Delay factor k	0.11	0.35		0.11	0.11		0.11	0.11		0.36	0.11	
Increm. delay d2	0.8	3.2		0.3	0.1		0.7	0.3		16.2	0.9	
PF factor	0.937	0.487		0.937	0.487		0.860	0.900		0.860	0.900	
Control delay	46.5	17.0		45.7	11.1		36.5	40.2		55.5	41.8	
Lane group LOS	D	B		D	B		D	D		E	D	
Apprch. delay	17.7			11.7			37.4			52.2		
Approach LOS	B			B			D			D		
Intersec. delay	20.3			Intersection LOS						C		

30-P

2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/URANIA AVE./CLARK AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	3	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	50	1370	67	80	1082	35	40	5	10	110	5	40
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 10.0	G = 50.0	G = 0.0	G =	G = 20.0	G = 15.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 0	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 115.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	53	1513		84	1176		42	16		116	47	
Lane group cap.	146	1612		146	2311		291	229		291	221	
v/c ratio	0.36	0.94		0.58	0.51		0.14	0.07		0.40	0.21	
Green ratio	0.09	0.43		0.09	0.43		0.17	0.13		0.17	0.13	
Unif. delay d1	49.5	31.0		50.5	23.6		40.2	43.9		42.2	44.7	
Delay factor k	0.11	0.45		0.17	0.12		0.11	0.11		0.11	0.11	
Increm. delay d2	1.5	11.0		5.5	0.2		0.2	0.1		0.9	0.5	
PF factor	0.937	0.487		0.937	0.487		0.860	0.900		0.860	0.900	
Control delay	47.9	26.1		52.7	11.7		34.8	39.6		37.1	40.7	
Lane group LOS	D	C		D	B		C	D		D	D	
Apprch. delay	26.9			14.4			36.2			38.2		
Approach LOS	C			B			D			D		
Intersec. delay	22.5			Intersection LOS						C		

3i-A

2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/SAXONY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	20	1178	285	230	823	31	95	162	81	60	175	42
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	4	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	100	0	0	0	0	0	0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 17.0	G = 40.0	G = 0.0	G =	G = 10.0	G = 17.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 0	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 104.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	21	1435		242	899		100	256		63	228	
Lane group cap.	274	1407		274	1428		161	305		161	311	
v/c ratio	0.08	1.02		0.88	0.63		0.62	0.84		0.39	0.73	
Green ratio	0.16	0.38		0.16	0.38		0.10	0.16		0.10	0.16	
Unif. delay d1	36.9	32.0		42.5	26.0		45.2	42.2		44.1	41.3	
Delay factor k	0.11	0.50		0.41	0.21		0.20	0.37		0.11	0.29	
Increm. delay d2	0.1	29.1		26.9	0.9		7.2	18.4		1.6	8.7	
PF factor	0.870	0.583		0.870	0.583		0.929	0.870		0.929	1.000	
Control delay	32.2	47.8		63.9	16.1		49.2	55.1		42.6	50.0	
Lane group LOS	C	D		E	B		D	E		D	D	
Apprch. delay	47.6			26.2			53.4			48.4		
Approach LOS	D			C			D			D		
Intersec. delay	40.8			Intersection LOS						D		

31-P

2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/SAXONY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	35	1290	165	180	1012	51	105	56	219	91	207	20
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	100	0	0	0	0	0	0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 12.0	G = 40.0	G = 0.0	G =	G = 8.0	G = 17.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 0	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 97.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	37	1426		189	1119		111	290		96	239	
Lane group cap.	207	1529		207	1528		138	303		138	339	
v/c ratio	0.18	0.93		0.91	0.73		0.80	0.96		0.70	0.71	
Green ratio	0.12	0.41		0.12	0.41		0.08	0.18		0.08	0.18	
Unif. delay d1	38.1	27.2		42.0	24.0		43.7	39.6		43.3	37.6	
Delay factor k	0.11	0.45		0.43	0.29		0.35	0.47		0.26	0.27	
Increm. delay d2	0.4	10.8		39.3	1.8		28.2	40.2		14.2	6.5	
PF factor	0.906	0.532		0.906	0.532		0.940	0.858		0.940	0.858	
Control delay	34.9	25.2		77.4	14.6		69.3	74.2		54.9	38.8	
Lane group LOS	C	C		E	B		E	E		D	D	
Apprch. delay	25.5			23.7			72.8			43.4		
Approach LOS	C			C			E			D		
Intersec. delay	31.9			Intersection LOS						C		

3L-A

2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/SIDONIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	\YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	2	0	0	0	0	1	0	1
Lane group	L	T			TR					L		R
Volume (vph)	30	1277			1060	7				35		13
% Heavy veh	2	2			2	2				2		2
PHF	0.95	0.95			0.95	0.95				0.95		0.95
Actuated (P/A)	A	A			A	A				A		A
Startup lost time	2.0	2.0			2.0					2.0		2.0
Ext. eff. green	2.0	2.0			2.0					2.0		2.0
Arrival type	5	5			5					5		5
Unit Extension	3.0	3.0			3.0					3.0		3.0
Ped/Bike/RTOR Volume				0	0	0	0			0	0	0
Lane Width	12.0	12.0			12.0					12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0					0		0
Unit Extension	3.0	3.0			3.0					3.0		3.0

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 25.0	G = 35.0	G = 0.0	G =	G = 10.0	G = 0.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 85.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	32	1344			1123					37		14
Lane group cap.	493	2855			1536					197		176
v/c ratio	0.06	0.47			0.73					0.19		0.08
Green ratio	0.29	0.76			0.41					0.12		0.12
Unif. delay d1	21.6	3.7			21.0					33.8		33.4
Delay factor k	0.11	0.11			0.29					0.11		0.11
Increm. delay d2	0.1	0.1			1.8					0.5		0.2
PF factor	0.722	0.213			0.533					0.911		0.911
Control delay	15.6	0.9			13.0					31.3		30.6
Lane group LOS	B	A			B					C		C
Apprch. delay	1.2			13.0						31.1		
Approach LOS	A			B						C		
Intersec. delay	7.0			Intersection LOS						A		

32-P
2010
WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/SIDONIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/11/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	\YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	2	0	0	0	0	1	0	1
Lane group	L	T			TR					L		R
Volume (vph)	35	1533			1206	25				16		8
% Heavy veh	2	2			2	2				2		2
PHF	0.95	0.95			0.95	0.95				0.95		0.95
Actuated (P/A)	A	A			A	A				A		A
Startup lost time	2.0	2.0			2.0					2.0		2.0
Ext. eff. green	2.0	2.0			2.0					2.0		2.0
Arrival type	5	5			5					5		5
Unit Extension	3.0	3.0			3.0					3.0		3.0
Ped/Bike/RTOR Volume				0	0	0	0			0	0	0
Lane Width	12.0	12.0			12.0					12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0					0		0
Unit Extension	3.0	3.0			3.0					3.0		3.0

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 25.0	G = 35.0	G = 0.0	G =	G = 10.0	G = 0.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 85.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	37	1614			1295					17		8
Lane group cap.	493	2855			1533					197		176
v/c ratio	0.08	0.57			0.84					0.09		0.05
Green ratio	0.29	0.76			0.41					0.12		0.12
Unif. delay d1	21.7	4.1			22.5					33.4		33.3
Delay factor k	0.11	0.16			0.38					0.11		0.11
Increm. delay d2	0.1	0.3			4.5					0.2		0.1
PF factor	0.722	0.213			0.533					0.911		0.911
Control delay	15.7	1.1			16.6					30.6		30.4
Lane group LOS	B	A			B					C		C
Apprch. delay	1.5			16.6						30.6		
Approach LOS	A			B						C		
Intersec. delay	8.3			Intersection LOS						A		

33- A 2010 wp

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/QUAIL GARDENS DR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Lane group	L	TR		L	TR		L	T	R	L	T	R
Volume (vph)	30	1162	115	350	934	16	120	25	275	60	80	10
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5		5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0	0	0	0	0	0	175	0	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 29.0	G = 46.0	G = 0.0	G =	G = 13.0	G = 12.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	32	1344		368	1000		126	26	105	63	84	11
Lane group cap.	405	1412		405	1428		182	196	575	182	196	150
v/c ratio	0.08	0.95		0.91	0.70		0.69	0.13	0.18	0.35	0.43	0.07
Green ratio	0.24	0.38		0.24	0.38		0.11	0.10	0.38	0.11	0.10	0.10
Unif. delay d1	35.2	35.9		44.2	31.2		51.6	49.3	24.5	49.6	50.8	49.0
Delay factor k	0.11	0.46		0.43	0.27		0.26	0.11	0.11	0.11	0.11	0.11
Increm. delay d2	0.1	14.1		24.0	1.6		10.7	0.3	0.2	1.1	1.5	0.2
PF factor	0.788	0.586		0.788	0.586		0.919	0.926	0.586	0.919	0.926	0.926
Control delay	27.8	35.1		58.8	19.8		58.1	45.9	14.5	46.7	48.5	45.5
Lane group LOS	C	D		E	B		E	D	B	D	D	D
Apprch. delay	35.0			30.3			39.1			47.6		
Approach LOS	C			C			D			D		
Intersec. delay	33.9			Intersection LOS						C		

33-P
2010
WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/QUAIL GARDENS DR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Lane group	L	TR		L	TR		L	T	R	L	T	R
Volume (vph)	10	1466	75	348	1111	50	85	25	138	85	25	35
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5		5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 27.0	G = 51.0	G = 0.0	G =	G = 12.0	G = 10.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	11	1622		366	1222		89	26	145	89	26	37
Lane group cap.	377	1575		377	1576		168	163	525	168	163	125
v/c ratio	0.03	1.03		0.97	0.78		0.53	0.16	0.28	0.53	0.16	0.30
Green ratio	0.22	0.43		0.22	0.43		0.10	0.08	0.35	0.10	0.08	0.08
Unif. delay d1	36.3	34.5		46.1	29.6		51.3	51.1	28.1	51.3	51.1	51.7
Delay factor k	0.11	0.50		0.48	0.32		0.13	0.11	0.11	0.13	0.11	0.11
Increm. delay d2	0.0	30.7		38.5	2.5		3.2	0.5	0.3	3.2	0.5	1.3
PF factor	0.806	0.507		0.806	0.507		0.926	0.939	0.641	0.926	0.939	0.939
Control delay	29.3	48.2		75.7	17.5		50.7	48.5	18.3	50.7	48.5	49.9
Lane group LOS	C	D		E	B		D	D	B	D	D	D
Apprch. delay	48.1			30.9			32.4			50.1		
Approach LOS	D			C			C			D		
Intersec. delay	39.5			Intersection LOS						D		

34-A 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/GARDEN VIEW RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	2	2	0	2	2	0	2	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	230	967	300	240	867	20	215	141	30	10	260	218
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0		65	0	0	0	0	0	0	0	0	100
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 49.0	G = 0.0	G =	G = 13.0	G = 25.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 4	Y = 4	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	242	1265		253	934		226	180		11	398	
Lane group cap.	407	1480		407	1519		353	757		353	741	
v/c ratio	0.59	0.85		0.62	0.61		0.64	0.24		0.03	0.54	
Green ratio	0.13	0.41		0.13	0.41		0.11	0.21		0.11	0.21	
Unif. delay d1	49.6	32.3		49.8	28.0		51.3	39.6		47.9	42.3	
Delay factor k	0.18	0.39		0.20	0.20		0.22	0.11		0.11	0.14	
Increm. delay d2	2.4	5.1		2.9	0.8		3.9	0.2		0.0	0.8	
PF factor	0.905	0.540		0.905	0.540		0.919	0.825		0.919	0.825	
Control delay	47.3	22.6		48.0	15.9		51.0	32.8		44.0	35.7	
Lane group LOS	D	C		D	B		D	C		D	D	
Apprch. delay	26.5			22.7			42.9			35.9		
Approach LOS	C			C			D			D		
Intersec. delay	28.2			Intersection LOS						C		

3A-P 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/GARDEN VIEW RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	2	2	0	2	2	0	2	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	300	1064	325	240	900	85	295	150	55	100	367	314
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0		65	0	0	0	0	0	0	0	0	100
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 49.0	G = 0.0	G =	G = 13.0	G = 23.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 120.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	316	1394		253	1036		311	216		105	611	
Lane group cap.	407	1479		407	1505		353	687		353	676	
v/c ratio	0.78	0.94		0.62	0.69		0.88	0.31		0.30	0.90	
Green ratio	0.13	0.41		0.13	0.41		0.11	0.19		0.11	0.19	
Unif. delay d1	50.9	34.1		49.8	29.2		52.7	41.7		49.3	47.4	
Delay factor k	0.33	0.46		0.20	0.26		0.41	0.11		0.11	0.42	
Increm. delay d2	9.2	12.3		2.9	1.3		21.8	0.3		0.5	15.6	
PF factor	0.905	0.540		0.905	0.540		0.919	0.842		0.919	0.842	
Control delay	55.2	30.7		48.0	17.1		70.3	35.4		45.8	55.6	
Lane group LOS	E	C		D	B		E	D		D	E	
Apprch. delay	35.3			23.2			56.0			54.1		
Approach LOS	D			C			E			D		
Intersec. delay	37.3			Intersection LOS						D		

35-A 2010

WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/TOWN CENTER PL.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	1	1	2	0	1	1	1
Lane group	L	T	R	L	T	R	L	LTR		L	LT	R
Volume (vph)	73	801	133	210	962	115	80	17	65	75	18	85
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	NB Only	07	08
Timing	G = 15.0	G = 50.0	G = 0.0	G =	G = 11.0	G = 19.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 115.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	77	843	140	221	1013	121	59	111		55	43	89
Lane group cap.	425	1623	652	425	1623	652	277	554		160	183	143
v/c ratio	0.18	0.52	0.21	0.52	0.62	0.19	0.21	0.20		0.34	0.23	0.62
Green ratio	0.13	0.43	0.43	0.13	0.43	0.43	0.17	0.17		0.10	0.10	0.10
Unif. delay d1	44.5	23.7	20.3	46.6	25.2	20.0	41.5	41.4		48.6	48.1	50.0
Delay factor k	0.11	0.13	0.11	0.13	0.21	0.11	0.11	0.11		0.11	0.11	0.21
Increm. delay d2	0.2	0.3	0.2	1.1	0.8	0.1	0.4	0.2		1.3	0.7	8.1
PF factor	0.900	0.487	0.487	0.900	0.487	0.487	0.868	0.868		0.929	0.929	0.929
Control delay	40.3	11.9	10.0	43.1	13.0	9.9	36.4	36.2		46.5	45.4	54.6
Lane group LOS	D	B	B	D	B	A	D	D		D	D	D
Apprch. delay	13.7			17.7			36.3			50.1		
Approach LOS	B			B			D			D		
Intersec. delay	19.5			Intersection LOS						B		

35-P 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/TOWN CENTER PL.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	1	1	2	0	1	1	1
Lane group	L	T	R	L	T	R	L	LTR		L	LT	R
Volume (vph)	160	844	215	240	595	249	260	60	285	140	59	240
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0	0	0	0	0	0	0	0	0	80
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	NB Only	07	08
Timing	G = 16.0	G = 45.0	G = 0.0	G =	G = 19.0	G = 20.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	168	888	226	253	626	262	192	445		88	121	168
Lane group cap.	434	1400	563	434	1400	563	279	554		265	303	237
v/c ratio	0.39	0.63	0.40	0.58	0.45	0.47	0.69	0.80		0.33	0.40	0.71
Green ratio	0.13	0.38	0.38	0.13	0.38	0.38	0.17	0.17		0.16	0.16	0.16
Unif. delay d1	47.5	30.8	27.6	48.9	28.2	28.4	47.1	48.1		44.9	45.4	47.9
Delay factor k	0.11	0.21	0.11	0.17	0.11	0.11	0.26	0.35		0.11	0.11	0.27
Increm. delay d2	0.6	1.0	0.5	2.0	0.2	0.6	7.0	8.4		0.7	0.9	9.4
PF factor	0.897	0.600	0.600	0.897	0.600	0.600	0.867	0.867		0.875	0.875	0.875
Control delay	43.2	19.4	17.0	45.9	17.1	17.6	47.8	50.1		40.0	40.5	51.3
Lane group LOS	D	B	B	D	B	B	D	D		D	D	D
Apprch. delay	22.1			23.6			49.4			45.2		
Approach LOS	C			C			D			D		
Intersec. delay	30.2			Intersection LOS						C		

36-A 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	ECR/LEUCADIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	0	2	3	1	2	4	0
Lane group	L	T	R	L	TR		L	T	R	L	TR	
Volume (vph)	205	531	205	1104	1047	85	100	1810	785	125	701	140
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5		5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	300	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 10.0	G = 29.0	G = 16.0	G = 0.0	G = 7.0	G = 43.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y = 0	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	216	559	216	1162	1191		105	1905	511	132	885	
Lane group cap.	250	657	323	1102	2031		175	1767	669	175	2297	
v/c ratio	0.86	0.85	0.67	1.05	0.59		0.60	1.08	0.76	0.75	0.39	
Green ratio	0.08	0.12	0.22	0.34	0.38		0.05	0.33	0.45	0.05	0.33	
Unif. delay d1	59.3	55.8	46.7	43.0	31.8		60.1	43.5	30.2	60.7	33.4	
Delay factor k	0.39	0.38	0.24	0.50	0.18		0.19	0.50	0.32	0.31	0.11	
Increm. delay d2	25.5	10.4	5.3	42.7	0.4		5.6	45.9	5.2	16.9	0.1	
PF factor	0.944	0.906	0.817	0.659	0.583		0.962	0.670	0.463	0.962	0.670	
Control delay	81.5	61.0	43.4	71.0	19.0		63.5	75.1	19.2	75.2	22.5	
Lane group LOS	F	E	D	E	B		E	E	B	E	C	
Apprch. delay	61.6			44.7			63.3			29.3		
Approach LOS	E			D			E			C		
Intersec. delay	51.7			Intersection LOS						D		

HCS2000: Signalized Intersections Release 4.1f

36-A
2010
WP

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E-Mail:

OPERATIONAL ANALYSIS

Analyst:	USAI
Agency/Co.:	USAI
Date Performed:	09/12/08
Analysis Time Period:	AM PEAK HOUR
Intersection:	ECR/LEUCADIA BLVD.
Area Type:	All other areas
Jurisdiction:	ENCINITAS
Analysis Year:	YEAR 2010 WITH PROJECT

Project ID: LA COSTA
E/W St: LEUCADIA BLVD. N/S St: ECR

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	205	531	205	1104	1047	85	100	1810	785	125	701	140
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	54	140	54	291	276	22	26	476	207	33	184	37
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000	1800	1800	2000		1800	2000	1800	1800	2000	
ParkExist												
NumPark												
No. Lanes	2	3	1	2	3	0	2	3	1	2	4	0
LGConfig	L	T	R	L	TR		L	T	R	L	TR	
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vol			0			0			300			0
Adj Flow	216	559	216	1162	1191		105	1905	511	132	885	
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.000	1.000		0.075			0.000	1.000		0.166	
Peds Bikes	0		0	0		0	0		0	0		0
Buses	0	0	0	0	0		0	0	0	0	0	
%InProtPhase			0.0			0.0			0.0			

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Arriv. Type	5	5	5	5	5		5	5	5	5	5	
Unit Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext of g	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ped Min g		40.7			40.7			28.2			28.2	

36-P
2010
WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	ECR/LEUCADIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	0	2	3	1	2	4	0
Lane group	L	T	R	L	TR		L	T	R	L	TR	
Volume (vph)	245	754	270	670	709	125	305	820	1051	282	1502	70
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5		5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	5	0	150	5	0	0	5	0	350	5	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 16.0	G = 15.0	G = 24.0	G = 0.0	G = 16.0	G = 34.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y = 0	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	258	794	126	705	878		321	863	738	297	1655	
Lane group cap.	401	986	515	902	1765		401	1397	860	401	1850	
v/c ratio	0.64	0.81	0.24	0.78	0.50		0.80	0.62	0.86	0.74	0.89	
Green ratio	0.12	0.18	0.35	0.28	0.34		0.12	0.26	0.58	0.12	0.26	
Unif. delay d1	54.3	50.8	30.4	43.4	34.2		55.4	42.3	23.0	55.0	46.3	
Delay factor k	0.22	0.35	0.11	0.33	0.11		0.34	0.20	0.39	0.30	0.42	
Increm. delay d2	3.5	5.0	0.2	4.5	0.2		11.0	0.8	8.7	7.2	6.1	
PF factor	0.906	0.849	0.647	0.745	0.659		0.906	0.764	0.118	0.906	0.764	
Control delay	52.7	48.1	19.9	36.8	22.8		61.3	33.1	11.4	57.0	41.5	
Lane group LOS	D	D	B	D	C		E	C	B	E	D	
Apprch. delay	46.1			29.0			29.5			43.8		
Approach LOS	D			C			C			D		
Intersec. delay	36.5			Intersection LOS						D		

HCS2000: Signalized Intersections Release 4.1f

36-P
2010 WP

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OPERATIONAL ANALYSIS

Analyst:	USAI
Agency/Co.:	USAI
Date Performed:	09/12/08
Analysis Time Period:	PM PEAK HOUR
Intersection:	ECR/LEUCADIA BLVD.
Area Type:	All other areas
Jurisdiction:	ENCINITAS
Analysis Year:	YEAR 2010 WITH PROJECT
Project ID: LA COSTA	
E/W St: LEUCADIA BLVD.	N/S St: ECR

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	245	754	270	670	709	125	305	820	1051	282	1502	70
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	64	198	71	176	187	33	80	216	277	74	395	18
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000	1800	1800	2000		1800	2000	1800	1800	2000	
ParkExist												
NumPark												
No. Lanes	2	3	1	2	3	0	2	3	1	2	4	0
LGConfig	L	T	R	L	TR		L	T	R	L	TR	
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vol			150			0			350			0
Adj Flow	258	794	126	705	878		321	863	738	297	1655	
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.000	1.000		0.150			0.000	1.000		0.045	
Peds Bikes	5		0	5		0	5		0	5		0
Buses	0	0	0	0	0		0	0	0	0	0	
%InProtPhase			0.0			0.0			0.0			
Duration	0.25		Area Type: All other areas									

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Arriv. Type	5	5	5	5	5		5	5	5	5	5	
Unit Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext of g	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ped Min g		40.7			40.7			33.2			33.2	

37-A 2010 wP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OLIVENHAIN RD./AMARGOSA DR.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Volume (vph)	65	1325	50	75	1896	20	140	10	68	20	10	200
% Heavy veh	0	2	0	0	2	2	2	2	2	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0		2.0	2.0			2.0			2.0	
Arrival type	5	5		5	5			5			5	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	25	0	0	50
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0			0	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 10.0	G = 60.0	G =	G =	G = 30.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 115.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	68	1448		79	2017			203			190	
Lane group cap.	149	1939		149	1945			282			397	
v/c ratio	0.46	0.75		0.53	1.04			0.72			0.48	
Green ratio	0.09	0.52		0.09	0.52			0.26			0.26	
Unif. delay d1	49.9	21.5		50.3	27.5			38.7			35.9	
Delay factor k	0.11	0.30		0.13	0.50			0.28			0.11	
Increm. delay d2	2.2	1.6		3.6	30.7			8.6			0.9	
PF factor	0.937	0.273		0.937	0.273			0.765			0.765	
Control delay	49.0	7.5		50.6	38.2			38.2			28.4	
Lane group LOS	D	A		D	D			D			C	
Apprch. delay	9.4			38.7			38.2			28.4		
Approach LOS	A			D			D			C		
Intersec. delay	27.1			Intersection LOS						C		

37-P-2010
WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OLIVENHAIN RD./AMARGOSA DR.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Volume (vph)	150	1816	110	75	1359	20	80	10	40	10	15	65
% Heavy veh	0	2	0	0	2	2	2	2	2	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0		2.0	2.0			2.0			2.0	
Arrival type	5	5		5	5			5			5	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	25	0	0	50
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0			0	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 15.0	G = 60.0	G =	G =	G = 30.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	158	2028		79	1452			111			43	
Lane group cap.	214	1853		214	1863			328			399	
v/c ratio	0.74	1.09		0.37	0.78			0.34			0.11	
Green ratio	0.13	0.50		0.13	0.50			0.25			0.25	
Unif. delay d1	50.6	30.0		48.2	24.6			36.9			34.7	
Delay factor k	0.30	0.50		0.11	0.33			0.11			0.11	
Increm. delay d2	12.7	51.7		1.1	2.2			0.6			0.1	
PF factor	0.905	0.333		0.905	0.333			0.778			0.778	
Control delay	58.5	61.7		44.7	10.4			29.3			27.1	
Lane group LOS	E	E		D	B			C			C	
Apprch. delay	61.5			12.2			29.3			27.1		
Approach LOS	E			B			C			C		
Intersec. delay	40.7			Intersection LOS						D		

38-A
2010
WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./CALLE TIMITEO/Dwy.#2
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Volume (vph)	116	391	54	10	368	15	136	9	25	2	1	12
% Heavy veh	2	2	0	0	2	2	2	2	2	0	0	0
PHF	0.99	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	P	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0		2.0	2.0			2.0			2.0	
Arrival type	5	5		5	5			5			5	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0		0
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0			0	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NB Only	SB Only	07	08
Timing	G = 10.0	G = 30.0	G =	G =	G = 15.0	G = 15.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 90.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	117	469		11	403			178			16	
Lane group cap.	186	1225		190	1237			277			266	
v/c ratio	0.63	0.38		0.06	0.33			0.64			0.06	
Green ratio	0.11	0.33		0.11	0.33			0.17			0.17	
Unif. delay d1	38.2	22.9		35.8	22.4			35.0			31.6	
Delay factor k	0.21	0.11		0.11	0.11			0.22			0.11	
Increm. delay d2	6.6	0.2		0.1	0.2			5.0			0.1	
PF factor	0.917	0.667		0.917	0.667			0.867			0.867	
Control delay	41.7	15.5		32.9	15.1			35.3			27.5	
Lane group LOS	D	B		C	B			D			C	
Apprch. delay	20.7			15.6			35.3			27.5		
Approach LOS	C			B			D			C		
Intersec. delay	21.2			Intersection LOS						C		

38-P 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./CALLE TIMITEO/ DWY. #2
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Volume (vph)	26	363	210	10	354	3	142	2	10	13	7	94
% Heavy veh	2	2	0	0	2	2	2	2	2	0	0	0
PHF	0.99	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	P	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0		2.0	2.0			2.0			2.0	
Arrival type	5	5		5	5			5			5	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0		0
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0			0	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NB Only	SB Only	07	08
Timing	G = 10.0	G = 30.0	G =	G =	G = 15.0	G = 15.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	26	603		11	376			162			120	
Lane group cap.	186	1185		190	1243			279			265	
v/c ratio	0.14	0.51		0.06	0.30			0.58			0.45	
Green ratio	0.11	0.33		0.11	0.33			0.17			0.17	
Unif. delay d1	36.1	24.1		35.8	22.2			34.6			33.8	
Delay factor k	0.11	0.12		0.11	0.11			0.17			0.11	
Increm. delay d2	0.3	0.4		0.1	0.1			3.0			1.2	
PF factor	0.917	0.667		0.917	0.667			0.867			0.867	
Control delay	33.5	16.4		32.9	15.0			33.0			30.5	
Lane group LOS	C	B		C	B			C			C	
Apprch. delay	17.1			15.5			33.0			30.5		
Approach LOS	B			B			C			C		
Intersec. delay	19.9			Intersection LOS						B		

39-A

2010

WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./CAM. DE LOS COCH
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	1	1	1	0	1	0	1	0	0	0
Lane group		T	R	L	T		L		R			
Volume (vph)		98	320	55	167		226		20			
% Heavy veh		2	0	0	2		2		2			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Actuated (P/A)		A	A	A	A		A		A			
Startup lost time		2.0	2.0	2.0	2.0		2.0		2.0			
Ext. eff. green		2.0	2.0	2.0	2.0		2.0		2.0			
Arrival type		5	5	5	5		3		3			
Unit Extension		3.0	3.0	3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0	0	115				0	0	0	0		
Lane Width		12.0	12.0	12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0	0	0	0		0		0			
Unit Extension		3.0	3.0	3.0	3.0		3.0		3.0			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 30.0	G =	G =	G = 35.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 90.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		103	216	58	176		238		21			
Lane group cap.		654	510	190	981		652		583			
v/c ratio		0.16	0.42	0.31	0.18		0.37		0.04			
Green ratio		0.33	0.33	0.11	0.50		0.39		0.39			
Unif. delay d1		21.1	23.3	36.8	12.4		19.6		17.0			
Delay factor k		0.11	0.11	0.11	0.11		0.11		0.11			
Increm. delay d2		0.1	0.6	0.9	0.1		0.3		0.0			
PF factor		0.667	0.667	0.917	0.333		1.000		1.000			
Control delay		14.2	16.1	34.7	4.2		19.9		17.1			
Lane group LOS		B	B	C	A		B		B			
Apprch. delay	15.5			11.8			19.7					
Approach LOS	B			B			B					
Intersec. delay	15.8			Intersection LOS						B		

39-P 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./CAM. DE LOS COCH
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	1	1	1	0	1	0	1	0	0	0
Lane group		T	R	L	T		L		R			
Volume (vph)		197	189	25	77		290		30			
% Heavy veh		2	0	0	2		2		2			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Actuated (P/A)		A	A	A	A		A		A			
Startup lost time		2.0	2.0	2.0	2.0		2.0		2.0			
Ext. eff. green		2.0	2.0	2.0	2.0		2.0		2.0			
Arrival type		5	5	5	5		3		3			
Unit Extension		3.0	3.0	3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0	0	115				0	0	0	0		
Lane Width		12.0	12.0	12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0	0	0	0		0		0			
Unit Extension		3.0	3.0	3.0	3.0		3.0		3.0			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 30.0	G =	G =	G = 35.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 90.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		207	78	26	81		305		32			
Lane group cap.		654	510	190	981		652		583			
v/c ratio		0.32	0.15	0.14	0.08		0.47		0.05			
Green ratio		0.33	0.33	0.11	0.50		0.39		0.39			
Unif. delay d1		22.4	21.1	36.1	11.7		20.5		17.2			
Delay factor k		0.11	0.11	0.11	0.11		0.11		0.11			
Increm. delay d2		0.3	0.1	0.3	0.0		0.5		0.0			
PF factor		0.667	0.667	0.917	0.333		1.000		1.000			
Control delay		15.2	14.2	33.4	3.9		21.1		17.2			
Lane group LOS		B	B	C	A		C		B			
Apprch. delay	14.9			11.1			20.7					
Approach LOS	B			B			C					
Intersec. delay	17.0			Intersection LOS						B		

40-A

2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR./SAN ELIJO RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	SAN MARCOS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	1	1	2	1	1	1	0	1	1	1
Lane group	L	T	R	L	T	R	L	TR		L	LT	R
Volume (vph)	64	521	99	110	614	276	303	200	140	200	100	112
% Heavy veh	2	2	0	0	2	2	0	0	0	2	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	10
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	NB Only	07	08
Timing	G = 15.0	G = 45.0	G =	G =	G = 20.0	G = 30.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	67	548	104	116	646	291	319	358		137	179	107
Lane group cap.	193	1292	530	197	1292	519	395	433		258	299	235
v/c ratio	0.35	0.42	0.20	0.59	0.50	0.56	0.81	0.83		0.53	0.60	0.46
Green ratio	0.12	0.35	0.35	0.12	0.35	0.35	0.23	0.23		0.15	0.15	0.15
Unif. delay d1	53.0	32.6	29.8	54.6	33.6	34.5	47.3	47.5		50.7	51.3	50.0
Delay factor k	0.11	0.11	0.11	0.18	0.11	0.16	0.35	0.36		0.13	0.19	0.11
Increm. delay d2	1.1	0.2	0.2	4.6	0.3	1.4	11.8	12.5		2.1	3.3	1.4
PF factor	0.913	0.647	0.647	0.913	0.647	0.647	0.800	0.800		0.879	0.879	0.879
Control delay	49.5	21.3	19.5	54.4	22.1	23.7	49.6	50.5		46.6	48.3	45.4
Lane group LOS	D	C	B	D	C	C	D	D		D	D	D
Apprch. delay	23.7			26.1			50.1			47.0		
Approach LOS	C			C			D			D		
Intersec. delay	34.2			Intersection LOS						C		

40-8

2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR./SAN ELIJO RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	SAN MARCOS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	1	1	2	1	1	1	0	1	1	1
Lane group	L	T	R	L	T	R	L	TR		L	LT	R
Volume (vph)	76	555	196	125	829	240	92	100	70	500	200	82
% Heavy veh	2	2	0	0	2	2	0	0	0	2	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	15	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	NB Only	07	08
Timing	G = 16.0	G = 47.0	G =	G =	G = 31.0	G = 16.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	80	584	206	132	873	253	97	163		342	395	86
Lane group cap.	206	1350	553	210	1350	542	210	233		400	462	365
v/c ratio	0.39	0.43	0.37	0.63	0.65	0.47	0.46	0.70		0.86	0.85	0.24
Green ratio	0.12	0.36	0.36	0.12	0.36	0.36	0.12	0.12		0.24	0.24	0.24
Unif. delay d1	52.5	31.4	30.6	54.2	34.6	31.9	53.0	54.7		47.4	47.3	39.9
Delay factor k	0.11	0.11	0.11	0.21	0.22	0.11	0.11	0.27		0.39	0.39	0.11
Increm. delay d2	1.2	0.2	0.4	5.9	1.1	0.6	1.6	9.0		16.4	14.5	0.3
PF factor	0.906	0.622	0.622	0.906	0.622	0.622	0.906	0.906		0.791	0.791	0.791
Control delay	48.8	19.8	19.5	55.0	22.6	20.5	49.6	58.5		53.9	52.0	31.9
Lane group LOS	D	B	B	D	C	C	D	E		D	D	C
Apprch. delay	22.4			25.6			55.2			50.7		
Approach LOS	C			C			E			D		
Intersec. delay	33.5			Intersection LOS						C		

HCS2000: Unsignalized Intersections Release 4.1f

41-A
2010 WP

TWO-WAY STOP CONTROL SUMMARY

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/15/08
Analysis Time Period: AM PEAK HOUR
Intersection: FALLSVIEW RD./SAN ELIJO RD.
Jurisdiction: SAN MARCOS
Units: U. S. Customary
Analysis Year: YEAR 2010 WITH PROJECT
Project ID: LA COSTA TOWN SQUARE
East/West Street: SAN ELIJO RD.
North/South Street: FALLSVIEW RD.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		821	40			
Peak-Hour Factor, PHF		0.95	0.95			
Hourly Flow Rate, HFR		864	42			
Percent Heavy Vehicles		--	--		--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes		2	0			
Configuration		T	TR			
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume			84			
Peak Hour Factor, PHF			0.95			
Hourly Flow Rate, HFR			88			
Percent Heavy Vehicles			0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes			1			
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config					R			
v (vph)					88			
C(m) (vph)					611			
v/c					0.14			
95% queue length					0.50			
Control Delay					11.9			
LOS					B			
Approach Delay					11.9			
Approach LOS					B			

NB RT

HCS2000: Unsignalized Intersections Release 4.1f

41 - P
2010 WP

TWO-WAY STOP CONTROL SUMMARY

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/15/08
Analysis Time Period: PM PEAK HOUR
Intersection: FALLSVIEW RD./SAN ELIJO RD.
Jurisdiction: SAN MARCOS
Units: U. S. Customary
Analysis Year: YEAR 2010 WITH PROJECT
Project ID: LA COSTA TOWN SQUARE
East/West Street: SAN ELIJO RD.
North/South Street: FALLSVIEW RD.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		1042	69			
Peak-Hour Factor, PHF		0.95	0.95			
Hourly Flow Rate, HFR		1096	72			
Percent Heavy Vehicles		--	--		--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes		2	0			
Configuration		T	TR			
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume			63			
Peak Hour Factor, PHF			0.95			
Hourly Flow Rate, HFR			66			
Percent Heavy Vehicles			0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes			1			
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config					R			
v (vph)					66			
C(m) (vph)					515			
v/c					0.13			
95% queue length					0.44			
Control Delay					13.0			
LOS					B			
Approach Delay					13.0			
Approach LOS					B			

NB RT

42 - A 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./WEST DWY. #1
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	1	1	2	0	0	1	0	0	1	1
Lane group	L	T	R	L	TR			LTR			LT	R
Volume (vph)	151	490	15	40	382	93	10	1	10	61	1	100
% Heavy veh	0	2	0	0	2	2	2	2	2	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0			2.0			2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0			2.0			2.0	2.0
Arrival type	5	5	5	5	5			5			5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0			12.0			12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0			0			0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	NB Only	07	08
Timing	G = 20.0	G = 30.0	G =	G =	G = 25.0	G = 10.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 105.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	159	516	16	42	500			23			65	105
Lane group cap.	326	1067	437	326	1035			154			409	364
v/c ratio	0.49	0.48	0.04	0.13	0.48			0.15			0.16	0.29
Green ratio	0.19	0.29	0.29	0.19	0.29			0.10			0.24	0.24
Unif. delay d1	37.9	31.1	27.1	35.3	31.1			43.6			31.7	32.7
Delay factor k	0.11	0.11	0.11	0.11	0.11			0.11			0.11	0.11
Increm. delay d2	1.2	0.3	0.0	0.2	0.4			0.5			0.2	0.4
PF factor	0.843	0.733	0.733	0.843	0.733			0.930			0.792	0.792
Control delay	33.1	23.1	19.9	29.9	23.1			41.0			25.3	26.3
Lane group LOS	C	C	B	C	C			D			C	C
Apprch. delay	25.4			23.7			41.0			25.9		
Approach LOS	C			C			D			C		
Intersec. delay	25.0			Intersection LOS						C		

42-P
2010
WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./WEST DWY. #1
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/12/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	1	1	2	0	0	1	0	0	1	1
Lane group	L	T	R	L	TR			LTR			LT	R
Volume (vph)	314	370	35	25	372	193	30	1	25	194	1	319
% Heavy veh	0	2	0	0	2	2	2	2	2	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0			2.0			2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0			2.0			2.0	2.0
Arrival type	5	5	5	5	5			5			5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	50
Lane Width	12.0	12.0	12.0	12.0	12.0			12.0			12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0			0			0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	NB Only	07	08
Timing	G = 25.0	G = 28.0	G =	G =	G = 28.0	G = 9.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 110.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	331	389	37	26	595			59			205	283
Lane group cap.	389	950	389	389	902			132			437	389
v/c ratio	0.85	0.41	0.10	0.07	0.66			0.45			0.47	0.73
Green ratio	0.23	0.25	0.25	0.23	0.25			0.08			0.25	0.25
Unif. delay d1	40.7	34.1	31.3	33.3	36.7			48.1			34.7	37.5
Delay factor k	0.38	0.11	0.11	0.11	0.23			0.11			0.11	0.29
Increm. delay d2	16.3	0.3	0.1	0.1	1.8			2.4			0.8	6.7
PF factor	0.804	0.772	0.772	0.804	0.772			0.941			0.772	0.772
Control delay	49.0	26.6	24.3	26.9	30.2			47.7			27.6	35.7
Lane group LOS	D	C	C	C	C			D			C	D
Apprch. delay	36.3			30.0			47.7			32.3		
Approach LOS	D			C			D			C		
Intersec. delay	33.6			Intersection LOS						C		

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

43-A
2010
WP

Analyst:	USAI
Agency/Co.:	USAI
Date Performed:	09/15/08
Analysis Time Period:	AM PEAK HOUR
Intersection:	LA COSTA AVE./PASEO TAMARINDO
Jurisdiction:	CARLSBAD
Units: U. S. Customary	
Analysis Year:	YEAR 2010 WITH PROJECT
Project ID:	LA COSTA TOWN SQUARE
East/West Street:	LA COSTA AVENUE
North/South Street:	PASEO TAMARINDO
Intersection Orientation: EW	Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	14	104			186	1
Peak-Hour Factor, PHF	0.95	0.95			0.95	0.95
Hourly Flow Rate, HFR	14	109			195	1
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	1	1			1	0
Configuration	L	T				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				1		36
Peak Hour Factor, PHF				0.95		0.95
Hourly Flow Rate, HFR				1		37
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes				1		1
Configuration				L		R

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		R
v (vph)	14					1		37
C(m) (vph)	1389					659		850
v/c	0.01					0.00		0.04
95% queue length	0.03					0.00		0.14
Control Delay	7.6					10.5		9.4
LOS	A					B		A
Approach Delay							9.5	
Approach LOS							A	

HCS2000: Unsignalized Intersections Release 4.1f

TWO-WAY STOP CONTROL SUMMARY

43-P
2010
WP

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/15/08
Analysis Time Period: PM PEAK HOUR
Intersection: LA COSTA AVE./PASEO TAMARINDO
Jurisdiction: CARLSBAD
Units: U. S. Customary
Analysis Year: YEAR 2010 WITH PROJECT
Project ID: LA COSTA TOWN SQUARE
East/West Street: LA COSTA AVENUE
North/South Street: PASEO TAMARINDO
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	44	182			83	1
Peak-Hour Factor, PHF	0.95	0.95			0.95	0.95
Hourly Flow Rate, HFR	46	191			87	1
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	1	1			1	0
Configuration	L	T				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				1		19
Peak Hour Factor, PHF				0.95		0.95
Hourly Flow Rate, HFR				1		20
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes				1		1
Configuration				L		R

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		R
v (vph)	46					1		20
C(m) (vph)	1520					615		976
v/c	0.03					0.00		0.02
95% queue length	0.09					0.00		0.06
Control Delay	7.4					10.9		8.8
LOS	A					B		A
Approach Delay							8.9	
Approach LOS							A	

45-A

2010 W/P

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO STA. FE/EAST / DWY.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/15/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

PASEO LUPINO

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	1	2	3	1	1	1	1	1	1	0
Lane group	L	T	R	L	T	R	L	TR	R	L	TR	
Volume (vph)	42	1716	38	215	1480	24	50	6	144	74	12	141
% Heavy veh	0	2	0	1	2	1	1	1	1	1	1	1
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	50	0	0	50
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 20.0	G = 54.0	G =	G =	G = 17.0	G = 19.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	44	1806	40	226	1558	25	53	16	89	78	109	
Lane group cap.	263	2219	636	506	2219	629	221	236	221	221	226	
v/c ratio	0.17	0.81	0.06	0.45	0.70	0.04	0.24	0.07	0.40	0.35	0.48	
Green ratio	0.15	0.42	0.42	0.15	0.42	0.42	0.13	0.15	0.15	0.13	0.15	
Unif. delay d1	47.8	33.6	22.8	50.0	31.4	22.6	50.7	47.9	50.4	51.5	51.0	
Delay factor k	0.11	0.35	0.11	0.11	0.27	0.11	0.11	0.11	0.11	0.11	0.11	
Increm. delay d2	0.3	2.4	0.0	0.6	1.0	0.0	0.6	0.1	1.2	1.0	1.6	
PF factor	0.879	0.526	0.526	0.879	0.526	0.526	0.900	0.886	0.886	0.900	0.886	
Control delay	42.3	20.1	12.0	44.5	17.5	11.9	46.2	42.5	45.8	47.3	46.8	
Lane group LOS	D	C	B	D	B	B	D	D	D	D	D	
Apprch. delay	20.5			20.8			45.6			47.0		
Approach LOS	C			C			D			D		
Intersec. delay	22.8			Intersection LOS						C		

45 - P 2010 WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO STA. FE/EAST DWY.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/15/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	1	2	3	1	1	1	1	1	1	0
Lane group	L	T	R	L	T	R	L	TR	R	L	TR	
Volume (vph)	138	1309	78	454	1576	74	157	18	449	24	14	46
% Heavy veh	0	2	0	1	2	1	1	1	1	1	1	1
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	0		0	0	0	0	0	0	50	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 15.0	G = 35.0	G =	G = 18.0	G = 22.0	G =	G =
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	145	1378	82	478	1659	78	165	229	210	25	63	
Lane group cap.	197	1438	412	885	2260	641	234	260	256	234	297	
v/c ratio	0.74	0.96	0.20	0.54	0.73	0.12	0.71	0.88	0.82	0.11	0.21	
Green ratio	0.12	0.27	0.27	0.27	0.42	0.42	0.14	0.17	0.17	0.14	0.17	
Unif. delay d1	55.6	46.8	36.7	40.6	31.4	22.8	53.5	52.7	52.1	49.0	46.5	
Delay factor k	0.29	0.47	0.11	0.14	0.29	0.11	0.27	0.41	0.36	0.11	0.11	
Increm. delay d2	13.5	15.0	0.2	0.7	1.3	0.1	9.3	27.5	18.8	0.2	0.4	
PF factor	0.913	0.754	0.754	0.754	0.511	0.511	0.893	0.864	0.864	0.893	0.864	
Control delay	64.2	50.2	27.9	31.3	17.3	11.7	57.0	73.1	63.8	43.9	40.6	
Lane group LOS	E	D	C	C	B	B	E	E	E	D	D	
Apprch. delay	50.4			20.1			65.5			41.5		
Approach LOS	D			C			E			D		
Intersec. delay	37.4			Intersection LOS						D		

46-A
2010
WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE RD../CALLE ACERVO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/15/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	0	1	0	1	1	0	1	1	1
Lane group		LTR			LTR		L	TR		L	T	R
Volume (vph)	160	200	40	170	260	50	45	505	290	40	818	255
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0			2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green		2.0			2.0		2.0	2.0		2.0	2.0	2.0
Arrival type		5			5		5	5		5	5	5
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	85	0	0	0
Lane Width		12.0			12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0			0		0	0		0	0	0
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	3.0

Phasing	EW Perm	02	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 48.0	G =	G =	G =	G = 8.0	G = 50.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	421			506			47	748		42	861	268
Lane group cap.	454			498			112	782		112	817	1288
v/c ratio	0.93			1.02			0.42	0.96		0.38	1.05	0.21
Green ratio	0.40			0.40			0.07	0.42		0.07	0.42	0.86
Unif. delay d1	34.3			36.0			53.8	33.9		53.6	35.0	1.5
Delay factor k	0.44			0.50			0.11	0.47		0.11	0.50	0.11
Increm. delay d2	25.3			44.4			2.5	22.1		2.1	46.6	0.1
PF factor	0.556			0.556			0.952	0.524		0.952	0.524	0.353
Control delay	44.4			64.4			53.7	39.9		53.2	65.0	0.6
Lane group LOS	D			E			D	D		D	E	A
Apprch. delay	44.4			64.4			40.7			49.8		
Approach LOS	D			E			D			D		
Intersec. delay	49.1			Intersection LOS						D		

46-P
2010
WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE RD./CALLE ACERVO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/15/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2010 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	0	1	0	1	1	0	1	1	1
Lane group		LTR			LTR		L	TR		L	T	R
Volume (vph)	50	20	20	140	65	65	40	783	90	60	523	405
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0			2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green		2.0			2.0		2.0	2.0		2.0	2.0	2.0
Arrival type		5			5		5	5		5	5	5
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	85	0	0	0
Lane Width		12.0			12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0			0		0	0		0	0	0
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	3.0

Phasing	EW Perm	02	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 45.0	G =	G =	G =	G = 10.0	G = 51.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	95			283			42	829		63	551	426
Lane group cap.	478			505			140	833		140	833	638
v/c ratio	0.20			0.56			0.30	1.00		0.45	0.66	0.67
Green ratio	0.38			0.38			0.08	0.43		0.08	0.43	0.43
Unif. delay d1	25.3			29.7			51.7	34.4		52.4	27.6	27.7
Delay factor k	0.11			0.16			0.11	0.50		0.11	0.24	0.24
Increm. delay d2	0.2			1.4			1.2	29.9		2.3	2.0	2.7
PF factor	0.600			0.600			0.939	0.507		0.939	0.507	0.507
Control delay	15.4			19.2			49.8	47.4		51.5	16.0	16.7
Lane group LOS	B			B			D	D		D	B	B
Apprch. delay	15.4			19.2			47.5			18.4		
Approach LOS	B			B			D			B		
Intersec. delay	29.5			Intersection LOS						C		